ARTIFICIAL INTELLIGENCE AND DATA SCIENCE

Internship Students List-AI&DS-(2023-24)

Sl. No.	Title of the collaborative activity	Name of the collaborating agency with contact details	Name of the participant	Year of collaboration	Duration
1	Internship	Nestsoft Pvt.Ltd	N Nitheesh	2023-24	01/07/2023-30/07/2023
2	Internship	Nestsoft Pvt.Ltd	Abdulla A	2023-24	01/07/2023-30/07/2023
3	Internship	Nestsoft Pvt.Ltd	Abhijith J	2023-24	01/07/2023-30/07/2023
4	Internship	InternPe	Adhavan P	2023-24	06/11/2023-03/12/2023
5	Internship	Nestsoft Pvt.Ltd	Afsal P A	2023-24	01/07/2023-30/07/2023
6	Internship	Nestsoft Pvt.Ltd	Alen Shaji	2023-24	01/07/2023-30/07/2023
7	Internship	Nestsoft Pvt.Ltd	Alwin Sajimon	2023-24	01/07/2023-30/07/2023
8	Internship	Nestsoft Pvt.Ltd	Anand M V	2023-24	01/07/2023-30/07/2023
9	Internship	Poonchola Technologies Pvt.Ltd	Aneena V P	2023-24	01/07/2023-30/07/2023
10	Internship	Poonchola Technologies Pvt.Ltd	Anirudh J	2023-24	01/07/2023-30/07/2023
11	Internship	Skill Vertex	Arava Balaji	2023-24	27/06/2023-27/07/2023
12	Internship	Nestsoft Pvt.Ltd	Arjun Dev S	2023-24	01/07/2023-30/07/2023
13	Internship	Nestsoft Pvt.Ltd	Arjun Murali	2023-24	01/07/2023-30/07/2023
14	Internship	Nestsoft Pvt.Ltd	Ashin Sabu	2023-24	01/07/2023-30/07/2023
15	Internship	Nestsoft Pvt.Ltd	Aswin M S	2023-24	01/07/2023-30/07/2023
16	Internship	Nestsoft Pvt.Ltd	Aswin George	2023-24	01/07/2023-30/07/2023
17	Internship	Nestsoft Pvt.Ltd	Bhavish M	2023-24	01/07/2023-30/07/2023
18	Internship	InternPe	Dhanush R	2023-24	06/11/2023-03/12/2023
19	Internship	Skill Vertex	Dhanush M R	2023-24	27/06/2023-27/07/2023
20	Internship	Nestsoft Pvt.Ltd	Don M S	2023-24	01/07/2023-30/07/2023
21	Internship	Skill Vertex	E Priyadharshini	2023-24	27/06/2023-27/07/2023
22	Internship	Pantech e-Learning	Esai Priya	2023-24	16/07/2023-16/08/2023
23	Internship	Skill Vertex	G Hanisha	2023-24	27/06/2023-27/07/2023
24	Internship	Skill Safari	G Naresh Kumar Reddy	2023-24	25/08/2024-20/10/2023
25	Internship	InternPe	Gowarthanan T	2023-24	06/11/2023-03/12/2023
26	Internship	InternPe	Hariharan K	2023-24	09/10/2023-05/11/2023
27	Internship	Nestsoft Pvt.Ltd	Harikrishna K R	2023-24	01/07/2023-30/07/2023
28	Internship	InternPe	J B Devanaaraayan	2023-24	09/10/2023-05/11/2023
29	Internship	InternPe	Kalava Viswateja	2023-24	02/10/2023-29/10/2023
30	Internship	Skill Vertex	K Chaturveda Sree	2023-24	27/06/2023-27/07/2023
31	Internship	Nestsoft Pvt.Ltd	Kurtz Luke Noronha	2023-24	01/07/2023-30/07/2023
32	Internship	Skill Vertex	Manju M	2023-24	27/06/2023-27/07/2023
33	Internship	Nestsoft Pvt.Ltd	Mathews M Jaico	2023-24	01/07/2023-30/07/2023
34	Internship	TechnoHacks	M Jawaharlalnehru	2023-24	01/08/2023-31/08/2023
35	Internship	InternPe	Mohamed Rafik A	2023-24	06/11/2023-03/12/2023
36	Internship	Nestsoft Pvt.Ltd	Mohammed Fateen Shabeer	2023-24	01/07/2023-30/07/2023
37	Internship	Nestsoft Pvt.Ltd	Mohammed Shaheer M	2023-24	01/07/2023-30/07/2023
38	Internship	InternPe	Mohanaprasanth R	2023-24	06/11/2023-03/12/2023
39	Internship	InternPe	Muthu Barani K	2023-24	06/11/2023-03/12/2023
40	Internship	InternPe	Nagabushana K	2023-24	25/09/2023-22/10/2023

41	Internship	InternPe	N Chandra sekhar	2023-24	27/06/2023-27/07/2023
42	Internship	Skill Vertex	N Sravani	2023-24	27/06/2023-27/07/2023
43	Internship	Skill Vertex	P Arkitta Naaidu	2023-24	20/07/2023-20/09/2023
44	Internship	InternPe	P Balaji	2023-24	09/10/2023-05/11/2023
45	Internship	Skill Vertex	P Sai Pavithra	2023-24	27/06/2023-27/07/2023
46	Internship	Nestsoft Pvt.Ltd	Rashik S	2023-24	01/07/2023-30/07/2023
47	Internship	Teachnook	Rathee Meenatchi P	2023-24	01/07/2023-31/08/2023
48	Internship	Nestsoft Pvt.Ltd	Roy Roshan	2023-24	01/07/2023-30/07/2023
49	Internship	Poonchola Technologies Pvt.Ltd	Rudresh R	2023-24	01/07/2023-30/07/2023
50	Internship	Skill Vertex	Saleth Krithika D	2023-24	27/06/2023-27/07/2023
51	Internship	Poonchola Technologies Pvt.Ltd	Sanoop S	2023-24	01/07/2023-30/07/2023
52	Internship	The Website Makers	Santhosh C	2023-24	01/07/2023-31/08/2023
53	Internship	InternPe	Shri Hari B	2023-24	06/11/2023-03/12/2023
54	Internship	InternPe	Siva Gokul L	2023-24	09/10/2023-05/11/2023
55	Internship	InternPe	Sreenivasulu S	2023-24	25/09/2023-22/10/2023
56	Internship	InternPe	Sridhar S S	2023-24	06/11/2023-03/12/2023
57	Internship	InternPe	Suji priya A	2023-24	09/10/2023-05/11/2023
58	Internship	Nestsoft Pvt.Ltd	Thanush P V	2023-24	01/07/2023-30/07/2023
59	Internship	Skill Vertex	T Siva Deekshitha	2023-24	20/07/2023-20/09/2023
60	Internship	InternPe	Vallepu Achyuth Kumar	2023-24	25/09/2023-22/10/2023
61	Internship	Nestsoft Pvt.Ltd	Yadhu Krishnan N	2023-24	01/07/2023-30/07/2023

HoD

Principal

JCT COLLEGE OF ENGINEERING AND TECHNOLOGY

COIMBATORE-641105

Department of Artificial Intelligence and Data Science

Date:17/05/2024

From
Dr. V .Jethose
Head of the Department,
Department of Artificial Intelligence and Data Science,
JCT College of Engineering and Technology,
Pichanur,
Coimbatore - 641105

To
The Principal,
JCT College of Engineering and Technology,
Pichanur,
Coimbatore - 641105

Respected Sir,

Sub: Requesting your permission to conduct Value Added Course on **"AI222301, Oracle Cloud Architecture "** from 20.05.2024 to 24.05.2024 through Online– Reg.

We have planned to conduct a value added course on AI222301, Oracle Cloud Architecture for the students of Department of Artificial Intelligence and Data Science. We need your kind permission and approval to conduct this Value Added Course through Online.

Thanking You,

Yours Sincerely,

HOD/AI&DS

JCT COLLEGE OF ENGINEERING AND TECHNOLOGY

PICHANUR, COIMBATORE – 641105

DEPARTMENT OF ARTIFICIAL INTELLIGENCE AND DATA SCIENCE

AI222301, Oracle Cloud Architecture - Syllabus

Total Duration : 35 Hours		
DATE	**TOPICS**	**HOURS**
20-05-2024	Getting Started with Oracle Cloud Infrastructure Oracle Cloud Infrastructure (OCI) Introduction Identity and Access Management Networking - Virtual Cloud Network Networking - Connectivity	**7**
21-05-2024	Networking - Load Balancer Networking - DNS Management Networking Command Centre Services - Other Networking services	**7**
22-05-2024	Compute – Basics Storage – Object storage - Block	**7**
23-05-2024	Storage - File Security- Operations Security- Platform	**7**
24-05-2024	Security- Data Observability and Management – Introduction Observability and Management - Logging	**7**

HOD/AI&DS

JCT College of Engineering and Technology
Pichanur, Coimbatore - 641105
Department of Artificial Intelligence and Data Science
Value Added Course
AI222301, Oracle Cloud Architecture

Sl. No	Register No	Name of the Student	20.03.2024							03.04.2024							10.04.2024											24.04.2024							04.05.2024							TOTAL
			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	
1	720922243001	AADHIL K M	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	35
2	720922243002	ABIJAY A P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	35
3	720922243003	ADITHYA A S	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	35
4	720922243004	ADITHYAN KANNAN	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	35
5	720922243005	AKILAN R	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	35
6	720922243006	AMAL G	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	35
7	720922243007	ANJO JOBY	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	A	P	P	P	P	34
8	720922243008	ANUGONDA DURGA PRASAD	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	35
9	720922243009	ARJUN K	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	35
10	720922243010	ASWIN VIJAY P V	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	35
11	720922243011	AVANEESH R	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	35
12	720922243012	BACHU NAGA RAGHURAM	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	35
13	720922243013	BASIL C K	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	35
14	720922243014	BASIL VARKEY	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	32
15	720922243015	BHUVANIKA M	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	35
16	720922243016	BODDU PRABHAS	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	35
17	720922243017	CHINTHA DUSHYANTH	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	33
18	720922243018	DINESH KUMAR K	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	35
19	720922243019	FALULULLA J P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	35
20	720922243020	FATHIMA J	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	35
21	720922243021	GOLAGANA VENNALA	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	35
22	720922243022	GOPIKA CHANDRAN	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	35
23	720922243023	PARASA GOPI NANDA	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	35
24	720922243024	HISANA SERIN K V	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	35
25	720922243025	INDHUMATHI M	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	A	P	P	P	P	P	P	P	P	P	P	34
26	720922243026	JAGADEESHKUMAR S	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	35
27	720922243027	JITHIN RAJAN	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	35
28	720922243028	KALEESWARI R	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	35
29	720922243029	KISHOR R	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	35
30	720922243030	KRITHOSH K K	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	35
31	**720922243031**	**LOGESHWAR N**	**P**	**P**	**P**	**P**	A	**P**	**P**	**P**	**P**	**P**	**P**	A	**P**	**P**	**P**	**P**	**P**	**P**	**P**	**P**	**P**	**P**	**P**	**P**	**P**	**P**	**P**	**P**	**P**	**P**	**P**	**P**	A	**P**	32
32	720922243033	MANOJ KUMAR G	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	35
33	720922243034	MARSHEL M	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	35
34	720922243035	MATHAN M	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	35
35	720922243036	MEKALA BHARATH KUMAR	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	35
36	720922243037	MISER MON G	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	35
37	720922243038	MOHAMMED AJIMAL C F	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	35
38	720922243039	MOHAMMED HASHIF M	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	35
39	720922243040	MOHAMMED RAHEES V A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	35
40	720922243041	MOHANA PRIYAN K	P	P	P	P	P	P	P	P	P	P	P	P	A	P	P	P	P	P	P	A	P	P	P	P	P	P	P	P	P	P	A	P	P	P	P	32
41	720922243043	MUHAMMED SHIBIL	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	35
42	720922243044	MUHAMMED AL JABIR N A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	35
43	720922243045	MUHAMMED HASHIM P M	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	35
44	720922243046	MUHAMMED MUHSIN P T	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	35
45	720922243047	MUHAMMED RAFEEQUE A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	35
46	720922243048	MUHAMMED SAHEEN P H	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	35
47	720922243049	NAGOOR APPA M	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	35
48	720922243050	NANDA GOPAN K	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	35
49	720922243051	SAGAR VARAPRASAD N V	P	P	P	P	P	P	P	P	P	P	P	P	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	A	P	P	P	P	P	33
50	720922243052	PAUL JOTHI G	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	35
51	720922243053	PERUMALLA GOPALA KRISHNA	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	35
52	720922243054	PRADEEP R	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	35
53	720922243055	PANDITI PRAVEEN	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	35
54	720922243056	PRITHIVI RAJ P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	35
55	720922243057	RANJITH KUMAR K	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	35
56	720922243059	RIYAS ISMAIL M	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	34
57	720922243060	PRAWINKUMAR R	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	35
58	720922243061	SAKTHIVEL K	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	35
59	720922243062	SATHANA S	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	35
60	720922243063	SHANAVAS S	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	35
61	720922243064	SINGARAVELAN P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	35
62	720922243065	SNEHA SHALOM J B	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	35
63	720922243066	SRINATH S	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	35
64	720922243067	STIJI R	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	35
65	720922243068	SUJITH KUMAR A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	A	P	P	P	P	34
66	720922243069	SURENDHARAN ELANGO	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	35
67	720922243070	SWETHA R V	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	35
68	720922243071	VASANTHASIVAM N	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	35
69	720922243072	THEJALAKSHMI M B	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	35
70	720922243073	THIRUKUMARN G	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	35
71	720922243075	VIGNESH T	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	35
72	720922243076	VIKRAM SREEJITH	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	35
73	720922243077	YUGANESHWARAN S	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	35
74	729922243058	RAZIN MOHAMMED K	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	35
75	7209222443071	TAMILSELVAN J	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	35
76	720922243301	SRI SABARISH R	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	35
77	720922243302	SYAM P K	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	35

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STUDENT'S FEEDBACK

NAME: Aneena V.P DATE: 28/05/2024

DEPARTMENT: Artificial Intelligence and Data Science SEX(M/F): F

COURSE: WEB TECHNOLOGY FULL STACK USING DJANGO

PARAMETERS	VERY POOR	POOR	GOOD	VERY GOOD	EXCELLENT
How would you rate the overall organization of the event?				✓	
How would you rate the relevance of the topics covered during the event?					✓
How effective was the speaker/presenter in delivering the content?				✓	
How interactive and engaging was the session?					✓
How well did the event meet your expectations?				✓	
How would you rate the technical quality of the content presented?					✓
How useful was the event for your academic/professional growth?					✓
How would you rate the event's time management and scheduling?					✓
How would you rate the facilities and technical setup (audio/visual)?				✓	
Would you recommend similar events to your peers?				✓	

Student's Signature

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STUDENT'S FEEDBACK

NAME: Abigeth. J DATE: 28/05/2024

DEPARTMENT: Artificial Intelligence and Data Science SEX(M/F): M

COURSE: WEB TECHNOLOGY FULL STACK USING DJANGO

PARAMETERS	VERY POOR	POOR	GOOD	VERY GOOD	EXCELLENT
How would you rate the overall organization of the event?					✓
How would you rate the relevance of the topics covered during the event?				✓	
How effective was the speaker/presenter in delivering the content?					✓
How interactive and engaging was the session?					✓
How well did the event meet your expectations?				✓	
How would you rate the technical quality of the content presented?					✓
How useful was the event for your academic/professional growth?				✓	✓
How would you rate the event's time management and scheduling?					✓
How would you rate the facilities and technical setup (audio/visual)?				✓	
Would you recommend similar events to your peers?					✓

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STUDENT'S FEEDBACK

NAME: Afsal P.A DATE: 28/05/2024

DEPARTMENT: Artificial Intelligence and Data Science SEX(M/F): M

COURSE: WEB TECHNOLOGY FULL STACK USING DJANGO

PARAMETERS	VERY POOR	POOR	GOOD	VERY GOOD	EXCELLENT
How would you rate the overall organization of the event?				✓	
How would you rate the relevance of the topics covered during the event?					✓
How effective was the speaker/presenter in delivering the content?				✓	
How interactive and engaging was the session?					✓
How well did the event meet your expectations?				✓	
How would you rate the technical quality of the content presented?					✓
How useful was the event for your academic/professional growth?				✓	
How would you rate the event's time management and scheduling?					✓
How would you rate the facilities and technical setup (audio/visual)?				✓	
Would you recommend similar events to your peers?					✓

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STUDENT'S FEEDBACK

NAME: Aswin T.S DATE: 28/05/2024

DEPARTMENT: Artificial Intelligence and Data Science SEX(M/F): M

COURSE: WEB TECHNOLOGY FULL STACK USING DJANGO

PARAMETERS	VERY POOR	POOR	GOOD	VERY GOOD	EXCELLENT
How would you rate the overall organization of the event?			✓		
How would you rate the relevance of the topics covered during the event?				✓	
How effective was the speaker/presenter in delivering the content?			✓		
How interactive and engaging was the session?					✓
How well did the event meet your expectations?				✓	
How would you rate the technical quality of the content presented?					✓
How useful was the event for your academic/professional growth?			✓		
How would you rate the event's time management and scheduling?				✓	
How would you rate the facilities and technical setup (audio/visual)?					✓
Would you recommend similar events to your peers?				✓	

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STUDENT'S FEEDBACK

NAME: Balaji DATE: 28/05/2024

DEPARTMENT: Artificial Intelligence and Data Science SEX(M/F): M

COURSE: WEB TECHNOLOGY FULL STACK USING DJANGO

PARAMETERS	VERY POOR	POOR	GOOD	VERY GOOD	EXCELLENT
How would you rate the overall organization of the event?			✓		
How would you rate the relevance of the topics covered during the event?				✓	
How effective was the speaker/presenter in delivering the content?					✓
How interactive and engaging was the session?				✓	
How well did the event meet your expectations?					✓
How would you rate the technical quality of the content presented?					✓
How useful was the event for your academic/professional growth?					✓
How would you rate the event's time management and scheduling?				✓	
How would you rate the facilities and technical setup (audio/visual)?					✓
Would you recommend similar events to your peers?					✓

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ADITHYAN KANNAN

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May 27, 2024

Date

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AKILAN R

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ARJUN K

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BACHU NAGA RAGHURAM

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NAGOOR APPA M

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NANDA GOPAN K

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RIYAS ISMAIL M

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BIOTECHNOLOGY AND BIOCHEMICAL ENGINEERING

JCT College of Engineering and Technology
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YEAR / SEM IV / VIII **PROJECT BATCH** **BTBCE(2022-23)**

Batch	Reg.No	Name of the Student	Name of the Guide	Project Title	TIME
1	720920210001	AISWARYA A P	Dr. G. GNANAVEL	PRODUCTION AND PURIFICATION OF CELLULASE FROM BACTERIA ISOLATED FROM SOIL	9.15 AM TO 4.15 PM
	720920210002	AKHILA A P			
	720920210004	ATHIRA V			
	720920210008	NANDANA N			
	720920210010	SREELAKSHMI M S			
2	720920210007	MUHAMMED SAFVAN K	Dr. P. MUTHUSAMY	DEVELOPMENT OF READY TO DRINK JUICE POWDER FROM RIPE PALMYA FRUIT	9.15 AM TO 4.15 PM
	720920210003	ANANTHAKRISHNA S			
3	720920210005	JEYAPAL B	Ms. K. SAKTHIUMA	ISOLATION OF ANTIMICROBIAL PEPTIDES FROM *Celosia argentea* SEEDS AND PREPARATION OF WOUND DRESSING FILM	9.15 AM TO 4.15 PM
	720920210006	KAMESH M			
	720920210009	PRIYADHARSHINI K			
	720920210011	SRIKANTH V			

PROJECT COORDINATOR **HOD** **PRINCIPAL**

ISOLATION OF ANTIMICROBIAL PEPTIDES FROM *Celosia argentea* SEEDS AND PREPARATION OF WOUND DRESSING FILM

A PROJECT REPORT

Submitted by

JEYAPAL B (720920210005)

KAMESH M (720920210006)

SRIKANTH V (720920210011)

In partial fulfillment for the award of the degree

Of

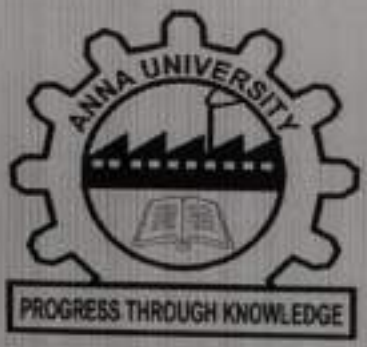
BACHELOR OF TECHNOLOGY

IN

BIOTECHNOLOGY AND BIOCHEMICAL ENGINEERING

JCT COLLEGE OF ENGINEERING AND TECHNOLOGY

COIMBATORE



ANNA UNIVERSITY: CHENNAI- 600025

APRIL 2024

ANNA UNIVERSITY: CHENNAI 600 025

BONAFIDE CERTIFICATE

Certified that this project report **"ISOLATION OF ANTIMICROBIAL PEPTIDE FROM *Celosia argentea* SEEDS AND PREPARATION OF WOUND DRESSING FILM"** is the bonafide work of **JEYAPAL B (720920210005), KAMESH M (720920210006)** and **SRIKANTH V (720920210011)** who carried out the project work under my supervision.

SIGNATURE

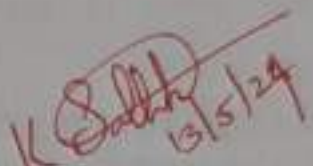
Dr. P. MUTHUSAMY Ph.D.,

HEAD OF THE DEPARTMENT

Biotechnology and Biochemical Engineering

JCT CET, Pichanur

COIMBATORE- 641105



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Ms. K. SAKTHIUMA

ASSISTANT PROFESSOR

Biotechnology and Biochemical Engineering

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Submitted for the Anna University Examination held on 13/05/24.... at JCT College of Engineering and Technology.

INTERNAL EXAMINER

EXTERNAL EXAMINER

ABSTRACT

This project aims to prepare an herbal wound dressing film utilizing natural ingredients with proven therapeutic properties. A dressing is a material applied to a wound to promote healing and protect the wound from further harm. The dressing was designed to be in direct contact with the wound and modern dressings now available are sterile. This project aims to prepare an herbal wound dressing film utilizing natural ingredients with proven therapeutic properties. The wound dressing film is designed to provide a sustainable and effective solution for wound management. The formulation process involves selection of plant source *Celosia argentea* seeds and isolation of antimicrobial peptides. *Celosia argentea* has been used as a traditional Chinese medicine for treatment of liver damage and eye diseases. In minimum inhibitory concentration assay, *Pseudomonas aeruginosa* and *Acetobacter noafi* shows high inhibitory effect against anti-microbial peptide. In time dependency assay. Among the antibacterial assays, the *Pseudomonas aeruginosa* shows high inhibitory effect compared with that of other bacterial strains. The isolated antimicrobial peptides are incorporated into a biocompatible polymer matrix to create a flexible and biodegradable film. For the prepared wound dressing film, anti-bacterial assay was done and *Staphylococcus aureus* shows high inhibitory effect. Further studies, the characterization of wound dressing film and conducting clinical trials to validate the safety and efficacy of wound dressing film in humans will be focused.

KEYWORDS- Plumed Cockscomb, herbal dressing film, anti-microbial peptide, chitosan

NOVEL CELLULOLYTIC ENZYME FROM BACILLUS SAFENSIS ISOLATED FROM WOOD MILL SOIL : PRODUCTION , CHARACTERIZATION AND PURIFICATION

A PROJECT REPORT

Submitted by

AISWARYA AP – 720920210001
AKHILA AP – 720920210002
ATHIRA V – 720920210004
NANDANA N – 720920210008
SREELAKSHMI MS – 720920210010

In partial fulfilment for the award of the degree

Of

BACHELOR OF TECHNOLOGY

IN

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COIMBATORE

ANNA UNIVERSITY: CHENNAI 600 025

MAY 2024

ANNA UNIVERSITY, CHENNAI 600 025

BONAFIDE CERTIFICATE

Certified that this report "**PRODUCTION AND PURIFICATION OF CELLULASE FROM BACTERIA ISOLATED FROM SOIL**" is the bonafied work of **AISWARYA AP (720920210001), AKHILA AP (720920210002), ATHIRA V (720920210004), NANDANA N (720920210008), SREELAKSHMI MS (720920210010)** who carried out the project work under my supervision.

SIGNATURE

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INTERNAL EXAMINER

EXTERNAL EXAMINER

ABSTRACT

Cellulose is the most common natural biopolymer found on Earth and is derived from agricultural waste. Cellulase, which cellulolytic bacteria generate, is capable of breaking it down. .To produce the most cellulase possible, the fermentation medium was optimized. The pH, carbon and nitrogen sources, and other culture parameters were tuned. This research aims to extract bacteria capable of producing cellulases from soil, which have promising uses across various industrial sectors including textiles, food processing, agriculture, laundry, and paper production. The pH of 5 was discovered to be the ideal range for cellulase formation, with glucose serving as the carbon supply and sodium nitrate serving as the nitrogen source. Prior to examination and identification, the isolated bacteria were cultivated on Carboxy Methyl Cellulose (CMC) agar under a range of ideal circumstances, including pH, incubation time, and carbon and nitrogen sources. Based on morphological and biochemical studies, *Bacillus species* are the primary genus for cellulase production. The crude enzyme extracted from gram-positive bacteria displayed its peak activity at 50°C and pH 9. Furthermore, the crude cellulase demonstrated stability at 37°C for one hour in the study. To partially purify the cellulase, ammonium sulphate precipitation and dialysis were used.

Keywords: Cellulose, Biopolymer, Cellulase, Cellulolytic, Fermentation, Optimization, Carboxy Methyl Cellulose, Morphological, Biochemical, *Bacillus sp.*, Crude enzyme, Peak activity, Precipitation, Dialysis.

ISOLATION OF ANTIMICROBIAL PEPTIDES FROM *Celosia argentea* SEEDS AND PREPARATION OF WOUND DRESSING FILM

A PROJECT REPORT

Submitted by

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ANNA UNIVERSITY: CHENNAI- 600025

APRIL 2024

ANNA UNIVERSITY: CHENNAI 600 025

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13/5/24

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INTERNAL EXAMINER

EXTERNAL EXAMINER

ABSTRACT

A dressing is a material applied to a wound to promote healing and protect the wound from further harm. The dressing was designed to be in direct contact with the wound and modern dressings now available are sterile. This project aims to prepare an herbal wound dressing film utilizing natural ingredients with proven therapeutic properties. The wound dressing film is designed to provide a sustainable and effective solution for wound management. The formulation process involves selection of plant source *Celosia argentea* seeds and isolation of antimicrobial peptides. In minimum inhibitory concentration assay, *Pseudomonas aeruginosa* and *Acetobacter noafi* shows high inhibitory effect against anti-microbial peptide. In time dependency assay. For 12th hour, *Pseudomonas aeruginosa* shows 43% inhibitory effect. For dose dependency assay of carbohydrates, *Acetobacter noafi* shows 57% of inhibitory effect. For protein, *Pseudomonas aeruginosa* shows 57% of inhibition. Among the antibacterial assays, the *Pseudomonas aeruginosa* shows high inhibitory effect compared with that of other bacterial strains. The isolated antimicrobial peptides are incorporated into a biocompatible polymer matrix to create a flexible and biodegradable film. For the prepared wound dressing film, anti-bacterial assay was done and *Staphylococcus aureus* shows high inhibitory effect. Further studies, the characterization of wound dressing film and conducting clinical trials to validate the safety and efficacy of wound dressing film in humans will be focused.

KEYWORDS- Plumed Cockscomb, herbal dressing film, anti-microbial peptide, chitosan

DEVELOPMENT OF READY TO DRINK JUICE POWDER FROM RIPE PALMYRA FRUIT (*Borassus flabellifer*)

A PROJECT REPORT

Submitted by

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ANANTHAKRISHNA S – 720920210003

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ANNA UNIVERSITY: CHENNAI 600 025

MAY 2024

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BONAFIDE CERTIFICATE

Certified that this report "**DEVELOPMENT OF READY TO DRINK JUICE POWDER FROM RIPE PALMYRA FRUIT (*Borassus flabellifer*)** " is the bonafide work of **MUHAMMED SAFVAN K – (720920210007) ANANTHAKRISHNA S – (720920210003)** who carried out the project work under my supervision.

SIGNATURE

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JCT College of Engineering and

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SIGNATURE

Mr.SANGEETH

PLANT MANAGER

UNIPULP AGRO

KINFRA CALICUT

Submitted for the anna university examination held on 13/05/24

INTERNAL EXAMINER

EXTERNAL EXAMINER

ABSTRACT

Palm is a seasonal fruit and has high nutritional and medicinal values. The palm juice is popular for its taste and high nutritive value. When ripe, the pulp becomes fibrous making the manual and mechanical juice extraction difficult. Due to this, the palm pulp is under-utilized and it is estimated that approximately 10,000 tons of fruit pulp are wasted each year. Unfortunately, over 60% of the annual fruit yield of- the ripe palmyra fruit is lost within l0days after harvesting due to its high moisture content, resulting in a short shelf life and limited commercial use. Over the past few years, utilization of palmyra pulp has been inefficient" It is used as a fertilizer, fodder, feedstock for bio refineries and animal feed. Even though palmyra is an economically important fruit for its nutritional aspects, it has not received proper attention from the agricultural research workers. In this context, knowing the nutritional and physico-chemical properties of palmyra pulp and development of new products and popularizing the same is essential.

Keywords: Ripe Palmyra Fruit, Juice Powder, Palmyra Pulp, Ready to drink, waste utilization.

Internship Students List-Biotechnology and Biochemical Engineering -(2023-24)

Sl. No.	Title of the collaborative activity	Name of the collaborating agency with contact details	Name of the participant	Year of collaboration	Duration
1		Venture Biotech, Chittur, Palakkad, Kerala	AISWARYA A P	2023-24	05.06.2023 to 16.06.2023
2		Venture Biotech, Chittur, Palakkad, Kerala	AKHILA A P	2023-24	05.06.2023 to 16.06.2023
3		Venture Biotech, Chittur, Palakkad, Kerala	ANANTHAKRISHNA S	2023-24	05.06.2023 to 16.06.2023
4		Venture Biotech, Chittur, Palakkad, Kerala	ATHIRA V	2023-24	05.06.2023 to 16.06.2023
5		Venture Biotech, Chittur, Palakkad, Kerala	JEYAPAL B	2023-24	05.06.2023 to 16.06.2023
6		Venture Biotech, Chittur, Palakkad, Kerala	KAMESH M	2023-24	05.06.2023 to 16.06.2023
7		Venture Biotech, Chittur, Palakkad, Kerala	MUHAMMED SAFVAN K	2023-24	05.06.2023 to 16.06.2023
8		Venture Biotech, Chittur, Palakkad, Kerala	NANDHANA	2023-24	05.06.2023 to 16.06.2023
9		Venture Biotech, Chittur, Palakkad, Kerala	PRIYADHARSHINI K	2023-24	05.06.2023 to 16.06.2023
10		Venture Biotech, Chittur, Palakkad, Kerala	SREELAKSHMI M S	2023-24	05.06.2023 to 16.06.2023
11		Venture Biotech, Chittur, Palakkad, Kerala	SRIKANTH V	2023-24	05.06.2023 to 16.06.2023
12		Sunglow Biotech, Perur, Coimbatore. Ph:9244638689	ABINAYA S	2023-24	05.06.2023 to 16.06.2023
13		Sunglow Biotech, Perur, Coimbatore. Ph:9244638689	AMITH SURYA B	2023-24	05.06.2023 to 16.06.2023
14		Sunglow Biotech, Perur, Coimbatore. Ph:9244638689	ANSIYA ABBAS	2023-24	05.06.2023 to 16.06.2023
15		Sunglow Biotech, Perur, Coimbatore. Ph:9244638689	ARCHANA K Y	2023-24	05.06.2023 to 16.06.2023
16		Sunglow Biotech, Perur, Coimbatore. Ph:9244638689	ARDRA P	2023-24	05.06.2023 to 16.06.2023
17		Sunglow Biotech, Perur, Coimbatore. Ph:9244638689	ARIVUMATHI S	2023-24	05.06.2023 to 16.06.2023
18		Sunglow Biotech, Perur, Coimbatore. Ph:9244638689	ATHULYA C	2023-24	05.06.2023 to 16.06.2023
19		Institute of Innovation, Tiruvannamalai, Tamil Nadu,	AYISHA FIDHA V P	2023-24	12.06.2023 to 27.06.2023
20		Southern Petrochemical Indstries Corporation Limited, SPIC Nagar, Muthiahpuram,Tuticorin, Tamil Nadu. Ph: 2355401	DHARUN ESAKKIAPPAN S	2023-24	10.07.2023 to 24.07.2023
21		Bioxplora Pvt Ltd,204,Spring Building,Gandhipuram,Coimbatore. Ph:9944574950	EVANGELINE C	2023-24	03.07.2023 to 05.08.2023
22		Institute of Innovation, Tiruvannamalai, Tamil Nadu,	GOPI KRISHNA S	2023-24	12.06.2023 to 27.06.2023
23		Bioxplora Pvt Ltd,204,Spring Building,Gandhipuram,Coimbatore. Ph:9944574950	GOPI PRASATH A	2023-24	26.06.2023 to 25.07.2023
24		Bioxplora Pvt Ltd,204,Spring Building,Gandhipuram,Coimbatore. Ph:9944574950	HARISH KUMAR S	2023-24	03.07.2023 to 05.08.2023
25		Orbito Asia Diagnostics, Pullakulam Rd, Pudur, Coimbatore	JAYA SRI V	2023-24	20.06.2023 to 06.07.2023
26		Bioxplora Pvt Ltd,204,Spring Building,Gandhipuram,Coimbatore. Ph:9944574950	JERRY A	2023-24	03.07.2023 to 05.08.2023

27	BI3511-Internship	Institute of Innovation, Tiruvannamalai, Tamil Nadu,	JISHNU T	2023-24	12.06.2023 to 27.06.2023
28		HetroGene Biotech, Egmore, Chennai, Tamil Nadu	LOGAVENI S	2023-24	05.06.2023 to 16.06.2023
29		Bioxplora Pvt Ltd,204,Spring Building,Gandhipuram,Coimbatore. Ph:9944574950	LOGESH L	2023-24	26.06.2023 to 25.07.2023
30		Orbito Asia Diagnostics, Pullakulam Rd, Pudur, Coimbatore	MAHESWARI S	2023-24	20.06.2023 to 06.07.2023
31		Orbito Asia Diagnostics, Pullakulam Rd, Pudur, Coimbatore	MEIYARASU A	2023-24	20.06.2023 to 06.07.2023
32		Green Valley Oils, Kanjirapuzha, Palakkad,Kerala	MUHAMMAD MUSTHAFA Y	2023-24	11.07.2023 to 30.07.2023
33		Institute of Innovation, Tiruvannamalai, Tamil Nadu,	MUHAMMED AMEEN O	2023-24	12.06.2023 to 27.06.2023
34		Institute of Innovation, Tiruvannamalai, Tamil Nadu,	MUHAMMED SADIK K M	2023-24	12.06.2023 to 27.06.2023
35		Institute of Innovation, Tiruvannamalai, Tamil Nadu,	MYDHILY A K	2023-24	12.06.2023 to 27.06.2023
36		Xcellogen Biotech Pvt Ltd, Pettah, Thiruvananthapuram, Kerala. Ph: 9488461637	NANDHA GOPAL M	2023-24	11.07.2023 to 31.07.2023
37		Sunglow Biotech, Perur, Coimbatore. Ph:9244638689	NANDANA RAMAKRISHNAN	2023-24	05.06.2023 to 16.06.2023
38		Green Valley Oils, Kanjirapuzha, Palakkad,Kerala	NAYANA V M	2023-24	11.07.2023 to 30.07.2023
		ICAR-CMFRI, Ernakulam North, Kochi,Kerala	NEELAMBARI K	2023-24	06.07.2023 to 05.08.2023
39		Green Valley Oils, Kanjirapuzha, Palakkad,Kerala	PRATHIKA A	2023-24	11..07.2023 to 30.07.2023
40		Bioxplora Pvt Ltd,204,Spring Building,Gandhipuram,Coimbatore. Ph:9944574950	PRITHIV RAJ P	2023-24	23.06.2023 to 22.07.23
41		ICAR-CMFRI, Ernakulam North, Kochi,Kerala	RAFIA S	2023-24	06.07.2023 to 05.08.2023
42		ICAR-CMFRI, Ernakulam North, Kochi,Kerala	RAYANA S	2023-24	06.07.2023 to 05.08.2023
43		Bioxplora Pvt Ltd,204,Spring Building,Gandhipuram,Coimbatore. Ph:9944574950	SAJITHA S	2023-24	26.06.2023 to 25.07.2023
44		Institute of Innovation, Tiruvannamalai, Tamil Nadu	SHABEEBA P	2023-24	12.06.2023 to 27.06.2023
45		Orbito Asia Diagnostics, Pullakulam Rd, Pudur, Coimbatore	SNEHA S	2023-24	20.06.2023 to 06.07.2023
46		Bioxplora Pvt Ltd,204,Spring Building,Gandhipuram,Coimbatore. Ph:9944574950	SUDARASAN M	2023-24	26.06.2023 to 25.07.2023
47		Bioxplora Pvt Ltd,204,Spring Building,Gandhipuram,Coimbatore. Ph:9944574950	TAMIL SELVAN C	2023-24	26.06.2023 to 25.07.2023
48		Bioxplora Pvt Ltd,204,Spring Building,Gandhipuram,Coimbatore. Ph:9944574950	THANSIMOL T	2023-24	26.06.2023 to 25.07.2023
49		Sunglow Biotech, Perur, Coimbatore. Ph:9244638689	VASANTHA KUMAR V	2023-24	05.06.2023 to 16.06.2023

Sunglow Biotech, Coimbatore
12/14,Vedapatti Road, Perur (PO),Coimbatore 641 010
0422 6538546 , 9244638689 sunglowbiotech@sify.com,glowsun@rediffmail.com

17.06.2023

COIMBATORE

TO WHOMSOEVER IT MAY CONCERN

This is to certify that Mr/Ms. **AMITH SURYA B** (Reg No. **72092121003**) of **II B. Tech – Biotechnology and Biochemical Engineering** from **JCT College of Engineering and Technology, Coimbatore** has successfully completed her/his Internship Training in: Plant Tissue Culture in our esteemed organization Sunglow Biotech, Coimbatore. The Internship training duration is from **JUNE 5 to JUNE 16, 2023**.

During this period, he/she was sincere and regular in attending all the phase of Internship Training Program.

for Sunglow Biotech

Sunglow Biotech, Coimbatore
12/14,Vedapatti Road, Perur (PO),Coimbatore 641 010
0422 6538546 , 9244638689 sunglowbiotech@sify.com,glowsun@rediffmail.com

17.06.2023

COIMBATORE

TO WHOMSOEVER IT MAY CONCERN

This is to certify that Mr/Ms. **ANSIYA ABBAS** (Reg No. **72092121004**) of **II B. Tech – Biotechnology and Biochemical Engineering** from **JCT College of Engineering and Technology, Coimbatore** has successfully completed her/his Internship Training in: Plant Tissue Culture in our esteemed organization Sunglow Biotech, Coimbatore. The Internship training duration is from **JUNE 5 to JUNE 16, 2023**.

During this period, he/she was sincere and regular in attending all the phase of Internship Training Program.

for Sunglow Biotech

Sunglow Biotech, Coimbatore
12/14,Vedapatti Road, Perur (PO),Coimbatore 641 010
0422 6538546 , 9244638689 sunglowbiotech@sify.com,glowsun@rediffmail.com

17.06.2023

COIMBATORE

TO WHOMSOEVER IT MAY CONCERN

This is to certify that Mr/Ms. **ARCHANA K Y** (Reg No. **72092121005**) of **II B. Tech – Biotechnology and Biochemical Engineering** from **JCT College of Engineering and Technology, Coimbatore** has successfully completed her/his Internship Training in: Plant Tissue Culture in our esteemed organization Sunglow Biotech, Coimbatore. The Internship training duration is from **JUNE 5 to JUNE 16, 2023**.

During this period, he/she was sincere and regular in attending all the phase of Internship Training Program.

for Sunglow Biotech

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0422 6538546 , 9244638689 sunglowbiotech@sify.com,glowsun@rediffmail.com

17.06.2023

COIMBATORE

TO WHOMSOEVER IT MAY CONCERN

This is to certify that Mr/Ms. **ARIVUMATHI S** (Reg No. **72092121007**) of **II B. Tech – Biotechnology and Biochemical Engineering** from **JCT College of Engineering and Technology, Coimbatore** has successfully completed her/his Internship Training in: Plant Tissue Culture in our esteemed organization Sunglow Biotech, Coimbatore. The Internship training duration is from **JUNE 5 to JUNE 16, 2023**.

During this period, he/she was sincere and regular in attending all the phase of Internship Training Program.

for Sunglow Biotech

Sunglow Biotech, Coimbatore
12/14,Vedapatti Road, Perur (PO),Coimbatore 641 010
0422 6538546 , 9244638689 sunglowbiotech@sify.com,glowsun@rediffmail.com

17.06.2023

COIMBATORE

TO WHOMSOEVER IT MAY CONCERN

This is to certify that Mr/Ms. **ATHULYA C** (Reg No. **72092121008**) of **II B. Tech – Biotechnology and Biochemical Engineering** from **JCT College of Engineering and Technology, Coimbatore** has successfully completed her/his Internship Training in: Plant Tissue Culture in our esteemed organization Sunglow Biotech, Coimbatore. The Internship training duration is from **JUNE 5 to JUNE 16, 2023**.

During this period, he/she was sincere and regular in attending all the phase of Internship Training Program.

for Sunglow Biotech

Sunglow Biotech, Coimbatore
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0422 6538546 , 9244638689 sunglowbiotech@sify.com,glowsun@rediffmail.com

17.06.2023

COIMBATORE

TO WHOMSOEVER IT MAY CONCERN

This is to certify that Mr/Ms. **NANDANA RAMAKRISHNAN** (Reg No. **72092121028**) of **II B. Tech –Biotechnology and Biochemical Engineering** from **JCT College of Engineering and Technology, Coimbatore** has successfully completed her/his Internship Training in: Plant Tissue Culture in our esteemed organization Sunglow Biotech, Coimbatore. The Internship training duration is from **JUNE 5 to JUNE 16, 2023**.

During this period, he/she was sincere and regular in attending all the phase of Internship Training Program.

for Sunglow Biotech

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0422 6538546 , 9244638689 sunglowbiotech@sify.com,glowsun@rediffmail.com

17.06.2023

COIMBATORE

TO WHOMSOEVER IT MAY CONCERN

This is to certify that Mr/Ms. **VASANTHA KUMAR V** (Reg No. **72092121045**) of **II B. Tech –Biotechnology and Biochemical Engineering** from **JCT College of Engineering and Technology, Coimbatore** has successfully completed her/his Internship Training in: Plant Tissue Culture in our esteemed organization Sunglow Biotech, Coimbatore. The Internship training duration is from **JUNE 5 to JUNE 16, 2023**.

During this period, he/she was sincere and regular in attending all the phase of Internship Training Program.

for Sunglow Biotech

7/721 Akshaya Nagar, Pollachi Post, Chittur, Chittur, Palakkad
Venture Biotech

JUNE 17, 2023

COIMBATORE

CERTIFICATE

This is to certify that Mr/Ms. **AKHILA A P** (Reg No. **7202021002**) student pursuing **III B. Tech Biotechnology and Biochemical Engineering, JCT College of Engineering and Technology,** Coimbatore has successfully completed her/his Internship Training in Plant Tissue Culturing Techniques in Venture Biotech. The Internship training duration is from JUNE 5 to JUNE 16, 2023.

We wish all success for their future.

Head

7/721 Akshaya Nagar, Pollachi Post, Chittur, Chittur, Palakkad
Venture Biotech

JUNE 17, 2023

COIMBATORE

CERTIFICATE

This is to certify that Mr/Ms. **ANANTHAKRISHNA S** (Reg No.**72092021003**) student pursuing **III B. Tech Biotechnology and Biochemical Engineering, JCT College of Engineering and Technology**, Coimbatore has successfully completed her/his Internship Training in Plant Tissue Culturing Techniques in Venture Biotech. The Internship training duration is from JUNE 5 to JUNE 16, 2023.

We wish all success for their future.

Head

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Venture Biotech

JUNE 17, 2023

COIMBATORE

CERTIFICATE

This is to certify that Mr/Ms. **ATHIRA V** (Reg No.**72092021004**) student pursuing **III B. Tech Biotechnology and Biochemical Engineering, JCT College of Engineering and Technology**, Coimbatore has successfully completed her/his Internship Training in Plant Tissue Culturing Techniques in Venture Biotech. The Internship training duration is from JUNE 5 to JUNE 16, 2023.

We wish all success for their future.

Head

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Venture Biotech

JUNE 17, 2023

COIMBATORE

CERTIFICATE

This is to certify that Mr/Ms. **JEYAPAL B** (Reg No.**72092021005**) student pursuing **III B. Tech Biotechnology and Biochemical Engineering, JCT College of Engineering and Technology**, Coimbatore has successfully completed her/his Internship Training in Plant Tissue Culturing Techniques in Venture Biotech. The Internship training duration is from JUNE 5 to JUNE 16, 2023.

We wish all success for their future.

Head

7/721 Akshaya Nagar, Pollachi Post, Chittur, Chittur, Palakkad
Venture Biotech

JUNE 17, 2023

COIMBATORE

CERTIFICATE

This is to certify that Mr/Ms. **KAMESH M** (Reg No.**72092021006**) student pursuing **III B. Tech Biotechnology and Biochemical Engineering, JCT College of Engineering and Technology**, Coimbatore has successfully completed her/his Internship Training in Plant Tissue Culturing Techniques in Venture Biotech. The Internship training duration is from JUNE 5 to JUNE 16, 2023.

We wish all success for their future.

Head

7/721 Akshaya Nagar, Pollachi Post, Chittur, Chittur, Palakkad
Venture Biotech

JUNE 17, 2023

COIMBATORE

CERTIFICATE

This is to certify that Mr/Ms. **MUHAMMED SAFVAN K** (Reg No.**72092021007**) student pursuing **III B. Tech Biotechnology and Biochemical Engineering, JCT College of Engineering and Technology**, Coimbatore has successfully completed her/his Internship Training in Plant Tissue Culturing Techniques in Venture Biotech. The Internship training duration is from JUNE 5 to JUNE 16, 2023.

We wish all success for their future.

Head

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Venture Biotech

JUNE 17, 2023

COIMBATORE

CERTIFICATE

This is to certify that Mr/Ms. **NANDHANA** (Reg No.**72092021008**) student pursuing **III B. Tech Biotechnology and Biochemical Engineering, JCT College of Engineering and Technology**, Coimbatore has successfully completed her/his Internship Training in Plant Tissue Culturing Techniques in Venture Biotech. The Internship training duration is from JUNE 5 to JUNE 16, 2023.

We wish all success for their future.

Head

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Venture Biotech

JUNE 17, 2023

COIMBATORE

CERTIFICATE

This is to certify that Mr/Ms. **PRIYADHARSHINI K** (Reg No.**72092021009**) student pursuing **III B. Tech Biotechnology and Biochemical Engineering, JCT College of Engineering and Technology**, Coimbatore has successfully completed her/his Internship Training in Plant Tissue Culturing Techniques in Venture Biotech. The Internship training duration is from JUNE 5 to JUNE 16, 2023.

We wish all success for their future.

Head

7/721 Akshaya Nagar, Pollachi Post, Chittur, Chittur, Palakkad
Venture Biotech

JUNE 17, 2023

COIMBATORE

CERTIFICATE

This is to certify that Mr/Ms. **SRIKANTH V** (Reg No.**72092021011**) student pursuing **III B. Tech Biotechnology and Biochemical Engineering, JCT College of Engineering and Technology,** Coimbatore has successfully completed her/his Internship Training in Plant Tissue Culturing Techniques in Venture Biotech. The Internship training duration is from JUNE 5 to JUNE 16, 2023.

We wish all success for their future.

Head

BIOXPLORA

22.07.2023
Coimbatore

TO WHOMSOEVER IT MAY CONCERN

This is to certify that **Ms.THANSIMOL T (Reg.No : 720921210044)** of **II B.Tech Biotechnology and Biochemical Engineering** from **JCT College of Engineering and Technology** has successfully completed her Internship training in **" Drug Designing "** in our esteemed organization BioXplora, Coimbatore. The Internship Training duration is from **23.06.2023 to 22.07.2023.**

During this period, she was sincere and regular in attending all the phases of Internship Training Program

For BioXplora,

Authorized Signatory

204, Spring Building, Gandhipuram, Coimbatore - 641009
www.bioxplora.com Ph:9944574950

Certificate Number
2023SYSBIO048

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Udyam Registration Number : UDYAM-TN-29-0001497

Ministry of MSME, Govt. of India

CERTIFICATE

This is to certify that

MRS.AYISHA FIDHA.V.P

B.Tech, Biotechnology and Biochemical Engineering

JCT College of Engineering and Technology, Pichanur, Coimbatore

has successfully completed 15 days
Certificate Course & Internship
on "Systems Biology Approaches of Drug Discovery in Cancer" during
12-27 June 2023. This certificate has been presented based on the
candidate's satisfactory performance in the final assessment.

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SPIC

Date: 24.07.2023

CERTIFICATE

This is to certify that Dharun Esakkiappan S, studying Third year B.Tech Chemical Engineering of JCT College of Engineering and Technology, Coimbatore has undergone Internship Training in M/s. Southern Petrochemical Industries Corporation Ltd SPIC Nagar, Tuticorin.

Internship Training details are as furnished below:

1) Type of Training Imparted	**INTERNSHIP TRAINING**
2) Period of Institutional Training	**10.07.2023 to 24.07.2023**
3) Allotment of Department	**ALF3 & SSP**
4) Conduct & Character	**GOOD**
5) Performance during Training	**GOOD**
6) Attendance during Training	**REGULAR**

24/7/23

R. Ramkumar
Joint Manager – Training & Development

BIOXPLORA

05.08.2023
Coimbatore

TO WHOMSOEVER IT MAY CONCERN

This is to certify that **Ms.EVANGELINE C (Reg.No : 720921210011)** of **II B.Tech Biotechnology and Biochemical Engineering** from **JCT College of Engineering and Technology** has successfully completed her Internship training in **" Drug Designing "** in our esteemed organization BioXplora, Coimbatore. The Internship Training duration is from **03.07.2023 to 05.08.2023.**

During this period, she was sincere and regular in attending all the phases of Internship Training Program

For BioXplora,

BIOXPLORA CBE 9

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Certificate Number
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Udyam Registration Number : UDYAM-TN-29-0001497

Ministry of MSME, Govt. of India

CERTIFICATE

This is to certify that

Mr. Gopi Krishna S

B.Tech, Biotechnology and Biochemical Engineering

JCT College of Engineering and Technology, Pichanur, Coimbatore

has successfully completed 15 days
Certificate Course & Internship
on "Systems Biology Approaches of Drug Discovery in Cancer" during 12-27 June 2023. This certificate has been presented based on the candidate's satisfactory performance in the final assessment.

SYSBIO 2023

R. Praveen Kumar
Managing Director

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25.07.2023
Coimbatore

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This is to certify that **Mr.GOPIPRASATH A (Reg.No : 720921210013)** of **II B.Tech Biotechnology and Biochemical Engineering** from **JCT College of Engineering and Technology** has successfully completed his Internship training in **" Medical Coding"** in our esteemed organization BioXplora, Coimbatore. The Internship Training duration is from **26.06.2023 to 25.07.2023.**

During this period, he was sincere and regular in attending all the phases of Internship Training Program

For Bioxplora,

Authorized Signatory

204, Nehru Street, Ram Nagar, Coimbator -641009 Contact:8124849501
www.bioxplora.com

BIOXPLORA

Exploring the bio era...

05.08.2023
Coimbatore

TO WHOMSOEVER IT MAY CONCERN

This is to certify that **Mr.HARISH KUMAR S (Reg.No : 720921210014)** of **II B.Tech Biotechnology and Biochemical Engineering** from **JCT College of Engineering and Technology** has successfully completed his Internship training in **" Drug Designing "** in our esteemed organization BioXplora, Coimbatore. The Internship Training duration is from **03.07.2023 to 05.08.2023.**

During this period, he was sincere and regular in attending all the phases of Internship Training Program

For BioXplora,

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Authorized Signatory

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www.bioxplora.com Ph:9944574950

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COLLEGE of AMERICAN PATHOLOGISTS

ISO 9001:2015

ORBITO ASIA diagnostics
CAP, NABL, NABH & ISO Accredited Laboratory

CERTIFICATE

This is to Certify that Ms. **Jayasri V** (720921210015), doing her 2nd year, B.Tech. Biotechnology and Biochemical Engineering, JCT College of Engineering and Technology, Coimbatore has successfully completed her 15 days Internship from 20.06.2023 to 06.07. 2023

Department of Molecular Biology and Histopathology at Orbito Asia diagnostics, Coimbatore, Tamilnadu, India.

TOPICS: ADVANCED MOLECULAR BIOLOGY AND HISTOPATHOLOGY TECHNIQUES

Dr. Jemima D Kingsley
Director - Research, Academics & Lab Services

BIOXPLORA

Exploring the bio-world...

05.08.2023
Coimbatore

TO WHOMSOEVER IT MAY CONCERN

This is to certify that **Mr.JERRY A (Reg.No : 720921210016)** of **II B.Tech Biotechnology and Biochemical Engineering** from **JCT College of Engineering and Technology** has successfully completed his Internship training in **" Drug Designing "** in our esteemed organization BioXplora, Coimbatore. The Internship Training duration is from **03.07.2023 to 05.08.2023.**

During this period, he was sincere and regular in attending all the phases of Internship Training Program

For BioXplora,

BIOXPLORA CBE-9

Authorized Signatory

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www.bioxplora.com Ph:9944574950

Certificate Number
2023SYSBIO042

INSTITUTE OF INNOVATIONS

Tiruvannamalai, Tamilnadu, India

Registered MSME, Government of India MSME

Udyam Registration Number : UDYAM-TN-29-0001497

Ministry of MSME, Govt. of India

CERTIFICATE

This is to certify that

Mr. Jishnu

B.Tech, Biotechnology and Biochemical Engineering

JCT College of Engineering and Technology, Pichanur, Coimbatore

has successfully completed 15 days

Certificate Course & Internship

on "Systems Biology Approaches of Drug Discovery in Cancer" during 12-27 June 2023. This certificate has been presented based on the candidate's satisfactory performance in the final assessment.

SYSBIO 2023

R. Praveen Kumar

Managing Director

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HetroGeneBiotech

CERTIFICATE

OF COMPLETION

This internship training program certificate is proudly awarded to **LOGAVENI S,** B.Tech Biotechnology and Biochemical Engineering, JCT College of Engineering and Technology, Coimbatore has successfully completed training in **"Molecular Biology techniques with Bioinformatics"** at HetroGeneBiotech Pvt. Ltd for 30 days.

HetrogeneBiotech Pvt Ltd

Dr. THOOYAVAN G
Technical Director

BIOXPLORA

25.07.2023
Coimbatore

TO WHOMSOEVER IT MAY CONCERN

This is to certify that **Mr.LOGESH L (Reg.No : 720921210019)** of **II B.Tech Biotechnology and Biochemical Engineering** from **JCT College of Engineering and Technology** has successfully completed his Internship training in **" Medical Coding"** at our esteemed organization BioXplora, Coimbatore. The Internship Training duration is from **26.06.2023 to 25.07.2023.**

During this period, he was sincere and regular in attending all the phases of Internship Training Program

For BioXplora,

BIOXPLORA CBE-9

Authorized Signatory

204, Spring Building, Nehru Street, Gandhipuram, Coimbatore - 641009
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ORBITO ASIA
diagnostics
CAP, NABL, NABH & ISO Accredited Laboratory

CERTIFICATE

This is to Certify that Ms. **Maheshwari R** (720921210020), doing her 2nd year, B.Tech. Biotechnology and Biochemical Engineering, JCT College of Engineering and Technology, Coimbatore has successfully completed her 15 days Internship from 20.06.2023 to 06.07. 2023

Department of Molecular Biology and Histopathology at Orbito Asia diagnostics, Coimbatore, Tamilnadu, India.

TOPICS: ADVANCED MOLECULAR BIOLOGY AND HISTOPATHOLOGY TECHNIQUES

Dr. Jemima D Kingsley
Director - Research, Academics & Lab Services

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MLP - 2018 - 011

MC - 3393

ISO 9001:2015

ORBITO ASIA diagnostics
CAP, NABL, NABH & ISO Accredited Laboratory

CERTIFICATE

This is to Certify that Ms. **Meiyarasu A** (720921210021), doing his 2nd year, B.Tech. Biotechnology and Biochemical Engineering, JCT College of Engineering and Technology, Coimbatore has successfully completed his 15 days Internship from 20.06.2023 to 06.07. 2023

Department of Molecular Biology and Histopathology at Orbito Asia diagnostics, Coimbatore, Tamilnadu, India.

TOPICS: ADVANCED MOLECULAR BIOLOGY AND HISTOPATHOLOGY TECHNIQUES

Dr. Jemima D Kingsley
Director - Research, Academics & Lab Services

fssai No. 11318009000362

GST No. 32AAIFG6515E1ZR

Green Valley Oils
God creates, we process & deliver

Irumbakachola, Kanjirapuzha, Palakkad Dist, Kerala - 678 591
Phone: 04924-238743, 8606138743, E-mail: greenvalleyoils@yahoo.com

To Whomsoever this May Concern

Certificate

This is to certify that **Mr. Muhammed Musthafa.Y (Reg No.720921210022)**, third year B.Tech Student in JCT College Of Engineering and Technology, Coimbatore, has successfully completed his inplant training report in our firm Green Valley Oils, Irumbakachola, Kanjirapuzha, Palakkad from 11/07/2023 to 30/07/2023. He has done an excellent work in preparing this report about our firm.

We wish all success in his future career.

Truly

Irumbakachola
18/09/2023

For GREEN VALLEY OILS

Managing Partner / Partner

GREEN VALLEY
GREEN VALLEY OILS
IRUMAKACHOLA, KANJIRAPUZHA
PALAKKAD (DIST.), KERALA - 678 591
PH: 04924-238743, 295589
E-mail: greenvalleyoils@yahoo.com

Certificate Number
2023SYSBIO041

INSTITUTE OF INNOVATIONS

Tiruvannamalai, Tamilnadu, India

Registered MSME, Government of India MSME

Udyam Registration Number : UDYAM-TN-29-0001497

Ministry of MSME, Govt. of India

CERTIFICATE

This is to certify that

Mr. Muhammed Ameen.O

B.Tech, Biotechnology and Biochemical Engineering

JCT College of Engineering and Technology, Pichanur, Coimbatore

has successfully completed 15 days
Certificate Course & Internship
on "Systems Biology Approaches of Drug Discovery in Cancer" during 12-27 June 2023. This certificate has been presented based on the candidate's satisfactory performance in the final assessment.

SYSBIO 2023

R. Praveen Kumar
Managing Director

http://innovationinstitute.co.in/

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Certificate Number
2023SYSBIO045

INSTITUTE OF INNOVATIONS

Tiruvannamalai, Tamilnadu, India

Registered MSME, Government of India MSME

Udyam Registration Number : UDYAM-TN-29-0001497

Ministry of MSME, Govt. of India

CERTIFICATE

This is to certify that

Mr. Muhammed Sadik K M

B.Tech, Biotechnology and Biochemical Engineering

JCT College of Engineering and Technology, Pichanur, Coimbatore

has successfully completed 15 days
Certificate Course & Internship
on "Systems Biology Approaches of Drug Discovery in Cancer" during
12-27 June 2023. This certificate has been presented based on the
candidate's satisfactory performance in the final assessment

SYSBIO
2023

R. Praveen Kumar
Managing Director

http://innovationinstitute.co.in/

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Certificate Number
2023SYSBIO0048

INSTITUTE OF INNOVATIONS

Tiruvannamalai, Tamilnadu, India

Registered MSME, Government of India MSME

Udyam Registration Number : UDYAM-TN-29-0001497

Ministry of MSME, Govt. of India

CERTIFICATE

This is to certify that

MRS.MYDHILY.A.K

B.Tech, Biotechnology and Biochemical Engineering

JCT College of Engineering and Technology, Pichanur, Coimbatore

has successfully completed 15 days
Certificate Course & Internship
on "Systems Biology Approaches of Drug Discovery in Cancer" during 12-27 June 2023. This certificate has been presented based on the candidate's satisfactory performance in the final assessment.

SYSBIO 2023

R. Praveen Kumar
Managing Director

http://innovationinstitute.co.in/

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Xcellogen Biotech Pvt Ltd

Where science & Technology Meets

xcellogenbiotech.in

INTERNSHIP CERTIFICATE

Date: 31.07.2023

To Whomsoever It May Concern

This is to certify that, **Mr. M NANDHAGOPAL,** 2nd Year **B.Tech Biotechnology and Biochemical Engineering** student, JCT College of Engineering and Technology, Coimbatore, Tamil Nadu has successfully completed 20 days Internship program on **MOLECULAR BIOLOGY** from 11th July 2023 to 31st July 2023 at **Xcellogen Biotech India Pvt. Ltd, Thiruvananthapuram, Kerala.** During this period of training, he was found punctual, hardworking and inquisitive.

We wish him all success in his future endeavours.

ANOOJ.E.S
MANAGING DIRECTOR
Xcellogen Biotech India Pvt Ltd
Thiruvananthapuram, Kerala Pin - 695035

Dr Uma Suganya
R & D In Charge
Xcellogen Biotech India Pvt Ltd
Chackai,Thiruvananthapuram

ISO 9001 2015 CERTIFIED

Ministry of MSME, Govt. of India

#startupindia

KERALA STARTUP MISSION

TC 1708/08 NH Bypass Road, Behind South Indian Bank, Chakai Junction, PO, Pettah, Thiruvananthapuram, 695024

xcellogenbiotech@gmail.com

+91 9488461637

fssai No. 11318009000362

GST No. 32AAIFG6515E1ZR

Green Valley Oils
God creates, we process & deliver

Irumbakachola, Kanjirapuzha, Palakkad Dist, Kerala - 678 591
Phone: 04924-238743, 8606138743, E-mail: greenvalleyoils@yahoo.com

To Whomsoever this May Concern

Certificate

This is to certify that **Ms. NAYANA VM** (Reg.No.720921210029) Second Year B.Tech Student in JCT College Of Engineering And Technology, Department of Biotechnology and Biochemical Engineering , Coimbatore, has successfully completed her internship training report in our firm Green Valley Oils from 11th July 2023 to 30th July 2023. She has done an excellent work in preparing this Internship report about our firm.

We wish all success in her future career.

Truly

Irumbakachola
16/09/2023

For GREEN VALLEY OILS

Managing Partner / Partner

GREEN VALLEY
GREEN VALLEY OILS
IRUMAKACHOLA, KANJIRAPUZHA
PALAKKAD (DIST.), KERALA - 678 591
PH: 04924-238743, 295589
E-mail: greenvalleyoils@yahoo.com

ICAR-Central Marine Fisheries Research Institute

(Department of Agricultural Research and Education, Government of India)
P.B. No. 1603, Ernakulam North P.O., Kochi - 682 018

CMFRI

Dr EGS-CoEI

Dr.E.G.Silas Centre of Excellence and Innovations in Marine Fish Microbiome and Nutrigenomics,

(funded by Dept. of Biotechnology, Govt. of India)

Marine Biotechnology, Fish Nutrition and Health Division

F. No. 29-5/-2018-HRD (Part I) dated 04/07/2023
Date: 05/08/2023

Certificate

This is to certify that **Ms. Neelambari K.** has undergone one-month internship cum training programme on **'Marine Biotechnology'** in **Dr. E. G. Silas Centre of Excellence and Innovations (EGS - CoEI) in Marine Fish Microbiome and Nutrigenomics Laboratory,** Marine Biotechnology, Fish Nutrition and Health Division (MBFNHD), ICAR-Central Marine Fisheries Research Institute from 06/07/2023 to 05/08/2023.

Dr. Krupesha Sharma S.R.
Principal Investigator
EGS-CoEI in Marine Fish Microbiome and Nutrigenomics

Dr. Kajal Chakraborty
Head of Division
MBFNH Division

Dr. A. Gopalakrishnan
Director
ICAR-CMFRI

Green Valley, Irumbakachola PO,
Kanjirapuzha, Palakkad, Kerala 678591
business@greenvalleyoils.com
www.greenvalleyoils.com
+91 8606138743

To Whomsoever this May Concern

Certificate

This is to certify that **Ms. Prathika. A, Reg.No. 720921210031,** Student, JCT College of Engineering and Technology, Coimbatore, has successfully completed her in plant training report on 'Study of Material Requirement Planning in Green Valley Oils', in our firm Green Valley Oils, Irumbakachola, Kanjirapuzha, Palakkad from 11/07/2023 to 30/07/2023. She has done an excellent work in preparing this report about our firm.

We wish all success in his future career.

Truly

For GREEN VALLEY OILS

Partner

Irumbakachola
01/08/2023

GREEN VALLEY
GREEN VALLEY OILS
IRUMAKACHOLA, KANJIRAPUZHA
PALAKKAD (DIST.), KERALA - 678 591
PH: 04924-238743, 295589
E-mail: greenvalleyoils@yahoo.com

BIOXPLORA

22.07.2023
Coimbatore

TO WHOMSOEVER IT MAY CONCERN

This is to certify that **Mr.PRITHIV RAJ P (Reg.No : 720921210032)** of **II B.Tech Biotechnology and Biochemical Engineering** from **JCT College of Engineering and Technology** has successfully completed his Internship training in **" Drug Designing "** in our esteemed organization BioXplora, Coimbatore. The Internship Training duration is from **23.06.2023 to 22.07.2023.**

During this period, he was sincere and regular in attending all the phases of Internship Training Program

For BioXplora,

Authorized Signatory

204, Spring Building, Gandhipuram, Coimbatore - 641009
www.bioxplora.com Ph:9944574950

ICAR-Central Marine Fisheries Research Institute

(Department of Agricultural Research and Education, Government of India)
P.B. No. 1603, Ernakulam North P.O., Kochi - 682 018

CMFRI

Dr. EGS-CoEI

Dr.E.G.Silas Centre of Excellence and Innovations in Marine Fish Microbiome and Nutrigenomics,

(funded by Dept. of Biotechnology, Govt. of India)

Marine Biotechnology, Fish Nutrition and Health Division

F. No. 29-5/-2018-HRD (Part I) dated 04/07/2023
Date: 05/08/2023

Certificate

This is to certify that **Ms. Rafia S.** has undergone one-month internship cum training programme on **'Marine Biotechnology'** in **Dr. E. G. Silas Centre of Excellence and Innovations (EGS - CoEI) in Marine Fish Microbiome and Nutrigenomics Laboratory,** Marine Biotechnology, Fish Nutrition and Health Division (MBFNHD), ICAR-Central Marine Fisheries Research Institute from 06/07/2023 to 05/08/2023.

Dr. Krupesha Sharma S.R.
Principal Investigator
EGS-CoEI in Marine Fish Microbiome and Nutrigenomics

Dr. Kajal Chakraborty
Head of Division
MBFNH Division

Dr. A. Gopalakrishnan
Director
ICAR-CMFRI

ICAR-Central Marine Fisheries Research Institute

(Department of Agricultural Research and Education, Government of India)
P.B. No. 1603, Ernakulam North P.O., Kochi - 682 018

Dr. EGS-CoEI

Dr.E.G.Silas Centre of Excellence and Innovations in Marine Fish Microbiome and Nutrigenomics,

(funded by Dept. of Biotechnology, Govt. of India)

Marine Biotechnology, Fish Nutrition and Health Division

F. No. 29-5/-2018-HRD (Part I) dated 04/07/2023
Date: 05/08/2023

Certificate

This is to certify that **Ms. Rayana S.** has undergone one-month internship cum training programme on **'Marine Biotechnology'** in **Dr. E. G. Silas Centre of Excellence and Innovations (EGS - CoEI) in Marine Fish Microbiome and Nutrigenomics Laboratory,** Marine Biotechnology, Fish Nutrition and Health Division (MBFNHD), ICAR-Central Marine Fisheries Research Institute from 06/07/2023 to 05/08/2023.

Dr. Krupesha Sharma S.R.
Principal Investigator
EGS-CoEI in Marine Fish Microbiome and Nutrigenomics

Dr. Kajal Chakraborty
Head of Division
MBFNH Division

Dr. A. Gopalakrishnan
Director
ICAR-CMFRI

BIOXPLORA

Exploring the Bio Era...

25.07.2023
Coimbatore

TO WHOMSOEVER IT MAY CONCERN

This is to certify that **Ms.SAJITHA S (Reg.No : 720921210037)** of **II B.Tech Biotechnology and Biochemical Engineering** from **JCT College of Engineering and Technology** has successfully completed her Internship training in **" Medical Coding"** in our esteemed organization BioXplora, Coimbatore. The Internship Training duration is from **26.06.2023 to 25.07.2023.**

During this period, she was sincere and regular in attending all the phases of Internship Training Program

For Bioxplora,

Authorized Signatory

204, Nehru Street, Ram Nagar, Coimbator -641009 Contact:812484950
www.bioxplora.com

Certificate Number
2023SYSBIO048

INSTITUTE OF INNOVATIONS

Tiruvannamalai, Tamilnadu, India

Registered MSME, Government of India MSME

Udyam Registration Number : UDYAM-TN-29-0001497

Ministry of MSME, Govt. of India

CERTIFICATE

This is to certify that

MRS.SHABEEBA.P

B.Tech, Biotechnology and Biocnemical Engineering

JCT College of Engineering and Technology, Pichanur, Coimbatore

has successfully completed 15 days

Certificate Course & Internship

on "Systems Biology Approaches of Drug Discovery in Cancer" during 12-27 June 2023. This certificate has been presented based on the candidate's satisfactory performance in the final assessment.

SYSBIO 2023

R. Praveen Kumar

Managing Director

http://innovationinstitute.co.in/

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CAP ACCREDITED

ISO

ORBITO ASIA

Diagnostics

CAP NABL NABH & ISO Accredited Laboratory

CERTIFICATE

This is to Certify that Ms. **Sneha S** (720921210041), doing her 2nd year, B.Tech. Biotechnology and Biochemical Engineering, JCT College of Engineering and Technology, Coimbatore has successfully completed her 15 days Internship from 20.06.2023 to 06.07. 2023

Department of Molecular Biology and Histopathology at Orbito Asia diagnostics, Coimbatore, Tamilnadu, India.

TOPICS: ADVANCED MOLECULAR BIOLOGY AND HISTOPATHOLOGY TECHNIQUES

Dr. Jemima D Kingsley

Director - Research, Academics & Lab Services

BIOXPLORA

25.07.2023
Coimbatore

TO WHOMSOEVER IT MAY CONCERN

This is to certify that **Mr.SUDARSAN M (Reg.No : 720921210042)** of **II B.Tech Biotechnology and Biochemical Engineering** from **JCT College of Engineering and Technology** has successfully completed his Internship training in **" Medical Coding"** in our esteemed organization BioXplora, Coimbatore. The Internship Training duration is from **26.06.2023 to 25.07.2023.**

During this period, he was sincere and regular in attending all the phases of Internship Training Program

For BioXplora,

Authorized Signatory

204, Spring Building, Gandhipuram, Coimbatore - 641009
www.bioxplora.com Ph:9944574950

BIOXPLORA

25.07.2023
Coimbatore

TO WHOMSOEVER IT MAY CONCERN

This is to certify that **Mr.TAMIL SELVAN C (Reg.No : 720921210043)** of **II B.Tech Biotechnology and Biochemical Engineering** from **JCT College of Engineering and Technology** has successfully completed his Internship training in **" Medical Coding"** in our esteemed organization BioXplora, Coimbatore. The Internship Training duration is from **26.06.2023 to 25.07.2023.**

During this period, he was sincere and regular in attending all the phases of Internship Training Program

For BioXplora,

Authorized Signatory

204, Spring Building, Gandhipuram, Coimbatore - 641009
www.bioxplora.com Ph:9944574950

CIVIL ENGINEERING

CREATIONS
Engineers & Supervisors
KALLEPULLY
PALAKKAD

PRAVEEN GEORGE M.
Civil Engineering Consultant
Mob : 984 735 4440
Off : 0491 2528565

Ref:

Date. 29.07.2023

To Whomsoever It May Concern

This is to certify that GOUTHAM KRISHNA.U, S/o Udayakumar.E.K, 402/12, Thekkoni, Kottekkad (p.o), Palakkad has been working under me as a Site supervisor from JULY 7 2023 to JULY 29 2023. Within this period I found himself sincere, obedient and able to supervise residential and commercial buildings. I wish him every Succes in his future assignments.

PRAVEEN GEORGE. M
Regd. Building Supervisor Senior
Reg. No: E-2050/08/18924/KKD/08/2020/BS
CREATIONS
KALLEPULLY, PALAKKAD

CREATIONS
Engineers & Supervisors
KALLEPULLY
PALAKKAD

PRAVEEN GEORGE M
Civil Engineering Consultant
Mob 984 735 4440
Off 0491 2528565

Ref

Date 31.07.2023

To Whomsoever It May Concern

This is to certify that ABILASH NARAYANAN J S/o Jayakumar N, Jayanivas, kunnathara,pazhayannur ,Thrissur dt , has been working under me as a Site supervisor from JULY 7 2023 to JULY 29 2023. Within this period I found himself sincere, obedient and able to supervise residential and commercial buildings. I wish him every Succes in his future assignments.

PRAVEEN GEORGE M
Regd. Building Supervisor Gazette
Reg No E-
CREATIONS
KALLEPULLY, PALAKKAD

CREATIONS
Engineers & Supervisors
KALLEPULLY
PALAKKAD

PRAVEEN GEORGE M
Civil Engineering Consultant
Mob 984 735 4440
Off 0491 2528565

Ref

Date 17.07.2023

To Whomsoever It May Concern

This is certify that ABHISHEK VK (S/O)OF UNNIKRISHNAN Kulakkatukurussi (PO), Palakkad District has been working under me as site supervisor from JULY 7/2023 to 29/2023 within this period I found himself since ,I obedient and commercial building. I wish him every success in his future assignment.

PRAVEEN GEORGE. M
Regd. Building Supervisor Service
Reg No: E
CREATIONS
KALLEPULLY PALAKKAD

ADHWIN BUILDERS & DESIGNERS

Appu Complex
Kollengode Road, Vadavannur Po.
Palakkad Dt. Pin 678504
Mob : 9846651887

Date 29/7/2023

To Whomsoever It May Concern

This is to certify that DEEKSHITA.B D/o Balakrishnan, Perinchira, Pallassana Po. kad Dt., Kerala has been working under me as a Site supervisor from JULY 7th 2023. n this period I found herself sincere, obedient and able to supervise residential and nercial buildings. I wish her every success in her future assignments.

Priyanka. V
Licensed Building Supervisor-B
Reg. No. E-29506/LBS/KKD/03/2018/B/SB
Department of Urban Affairs, Govt of Kerala
Ambalaparamba (H), Pazhayannur. P.O
Palakkad-678506

MODERN BUILDERS

TO WHOMSOVER IT MAY CONCERN

This is to certify that **Miss. FATHIMA ROSNA.K D/O NOUSHAD.K** a Student of B.E Civil Engineering 4TH Year in JCT College of Engineering and Technology in Coimbatore. She has successfully completed (From 11th July 2023 to 25th July 2023)internship programme at this company (**MODERN BUILDERS**).During the period of her internship programme with us she was found punctual, hardworking and inquisitive. She was vital and she always found excellent in the assigned tasks.

We wish her all the success for her future Endeavors.

MUHAMMED IHJAZ. K.
LICENSED BUILDING ENGINEER-A
Reg. No: E-2050/08/7556/KKD/280/2015/EA
DEPARTMENT OF URBAN AFFAIRS
GOVERNMENT OF KERALA

MODERN BUILDERS

Mail@- modernmkd@gmail.com

Chief Engineer

Muhammed Ihjaz.k

Ph - +91 999 590 5263

SREE LAKSHMI CONSTRUCTIONS
SLC
● DESIGNERS ● BUILDERS ● SUPERVISORS ● CONTRACTORS
S.H.K. Complex, BPL Jn., Koottupatha, Palakkad - 678 007
Phone : 0491-2570569 (O), 2567158 (R). Mob : 9447067158

Ref.

Date. 29/07/2023

INTERNSHIP CERTIFICATE

TO WHOMSOVER IT MAY CONCERN

This is to certify that **Mr. Vishnu Das. R**, BE Civil Engineering, IV Year student of JCT College of Engineering and Technology has successfully completed internship from 08-07-2023 to 27-07-2023 on our construction company. During the period of his internship, he was found punctual and hardworking.

We wish him all the success in future.

CHANDRA KALADHARAN.P.K.
SUPERVISOR SENIOR
Reg. No:B-2050/08/18447/KKD/7/2021/SS
Dept: of Urban Affairs
Government of Kerala.

A. KAVITHA CONTRACTOR

GST IN : 33BVJPK6456K1Z6
CELL : 88836 73664
98940 77793

Date : ..10.:.08.:.2023.....

TO WHO IT MAY CONCERN

This is to Certify that Miss B. Yamuna (720920103325) has working with us from 01July 2023 to 29 July 2023 and designated as " Supervisor ". During his above tenure we found his service he was punctual, hardworking , sincere man and diligent in his duties and responsibilities and he always interested to learn Site Works . Her work was very satisfactory. We noted that his daily work production & relationship with workers & management was satisfactory.

We wish all the success in his future life

For A. KAVITHA CONTRACTOR

A. Kavitha

Proprietor

Authorized Signatory

AMIGOS
CONSTRUCTIONS

+91 970435560/ +91 9e4910&Sa5

amigosconstructions...kdp@gmail.com

Date: 29th July 2023

INTERNSHIP CERTICATE

This is to certify that Mr. MANGALI SAI KUMAR, student of B.E(Civil Engineering) 4th year (Reg no:720920103317) studying at JCT College of Engineering and Technology, Pichanur, Coimbatore, Tamilnadu, has been successfully completed one month (from 01-07-2023 to 29-07-2023) internship program at the company.

Sai kumar completed his training on various jobs on civil constructions and operation of different civil construction machinery. His attendance and performance during the training was found excellent.

For Amigos constructions,

For AMIGOS CONSTRUCTIONS

Authorized signatory

Office Address:

Amigos Constructions, D. No: 44/35-1-2, A Block,

Prakruthi Nagar, chemmumiapeta (v), Kadapa - 516003

AMIGOS
CONSTRUCTIONS

+91 9704355560/ +91 9849106585
amigosconstructions.kdp@gmail.com

Date: 29th July 2023

INTERNSHIP CERTIFICATE

This is to certify that Mr. J. Mohan Narayana, student of B.E (Civil Engineering) 4th year (Reg No: 720920103316) studying at JCT College of Engineering and Technology, Pichannur, Coimbatore, Tamilnadu has been successfully completed one month (from 01-07-2023 to 29-07-2023) internship program at the company.

Mohan Narayana completed his training on various jobs on civil construction and operation of different civil construction machinery. His attendance and performance during the training was found excellent.

For Amigos Constructions,
For AMIGOS CONSTRUCTIONS

Managing Partner
Authorized Signatory

Office Address:
Amigos Constructions, D.No: 44/35-1-2, A Block,
Prakruthi Nagar, Chemmumiapeta (V), Kadapa - 516003

CREATIONS
Engineers & Supervisors
KALLEPULLY
PALAKKAD

PRAVEEN GEORGE M.
Civil Engineering Consultant
Mob : 984 735 4440
Off : 0491 2528565

Ref:

Date 27.07.2023

To Whomsoever It May Concern

This is to certify that AKHILRAJ.C.S (S/O) OF SUNDHARAJAN Chittur (PO), Palakkad District has been working under me as a site supervisor from JULY/7/2023 to July/29/ 2023 within this period I found himself sincei, obedient and to supervise residential and commercial building.I wish him every success in his future assignment.

PRAVEEN GEORGE. M
Regd. Building Supervisor Grade
Reg. No: E-[redacted]
CREATIONS
KALLEPULLY, PALAKKAD

SREE LAKSHMI CONSTRUCTIONS
DESIGNERS BUILDERS SUPERVISORS CONTRACTORS
S.H.K. Complex, BPL Jn., Koottupatha, Palakkad - 678 007
Phone : 0491-2570569 (O), 2567158 (R). Mob : 9447067158

Date. 29/07/2023

Ref.

INTERNSHIP CERTIFICATE

TO WHOMSOVER IT MAY CONCERN

This is to certify that **Mr. Feliks Antony. A**, BE Civil Engineering, IV Year student of JCT College of Engineering and Technology has successfully completed internship from 08-07-2023 to 27-07-2023 on our construction company. During the period of his internship, he was found punctual and hardworking.

We wish him all the success in future.

CHANDRA KALADHARAN.P.K.
SUPERVISOR SENIOR
Reg. No:E-2050/03/19617, TXD/7/2021/38
Dept. of Urban Affairs
Government of Kerala.

76039 02131
88389 54241

TRISQUARE
CONSTRUCTION

This is Certify that Miss.DaddalaVaishnavi, D/O DaddalaVasua student of BE Civil Engineering 3rd Year JCT College Of Engineering and Technology Has successfully completed{From 6thjuly 2023-4th August 2023}Internship Programmeat this company,During the period of this internship programme with us she was found punctual, Hardworking and Inquisitive.

We wish Her Every Success in Life

For TRISQUARE CONSTRUCTION

For TRISQUARE

Proprietor

MK/HRD/Trg 2021-23
Dt. 01st Aug 2023

ACC Limited
Madukkarai Cement Works
P.O. Madukkarai - 641 105
Dist. Coimbatore (T.N)

Ph. : +91 422 2912202
Fax : +91 422 2622286
www.acclimited.com
Corporate Identity Number
L26940MH1936PLC002515

TO WHOMSOEVER IT MAY CONCERN

This is to certify that Ms. N Divya Reg.No. 720920103308 Studying III Year, BE - Civil Engineering student in JCT College of Engineering and Technology, Pichanur, Coimbatore 641105 has done Internship Work at our Organisation during the period 08th July 2023 to 27th July 2023.

We wish her best wishes in future endeavors.

Regards,

G.Padmavathi
HR Department
ACC Madukkarai Cement Works

Madukkarai Cement Works ACC Limited

SREE LAKSHMI CONSTRUCTIONS
● DESIGNERS ● BUILDERS ● SUPERVISORS ● CONTRACTORS
S.L.K. Complex, BPS Jn. Kovilthottam, Palakkad - 678 007
Phone: 0491-2570569 (O) 2567158 (R) Mob: 9447067158

Date 08/08/2023

INTERNSHIP CERTIFICATE

TO WHOMSOVER IT MAY CONCERN

This is to certify that **Mr. Agarsh.U**, BE Civil Engineering, IV Year student of JCT College of Engineering and Technology has successfully completed internship from 08-07-2023 to 27-07-2023 on our construction company. During the period of his internship, he was found punctual and hardworking.

We wish him all the success in future.

CHANDRA KALADHARAN.P.K.
SUPERVISOR SENIOR
Reg No:E-2050/08/18447/KKD/7/2021/SS
Dept: of Urban Affairs
Government of Kerala.

PAN : AEAPD8627G
GST : 36AEAPD8627G1ZO

D DHARANIDHAR

B.E.,LL.B.

ENGINEER & CONTRACTOR

Date: 29-07-2023

INTERNSHIP CERTIFICATE

This is certify that Mr. Kancharla Bhaskar , student of B.E (Civil Engineering) 4th year (Reg. No : 720920103314) studying at JCT College of Engineering and Technology, Pichannur, Combatore, Tamilnadu has been successfully completed one month (from 01-07-2023 to 29-07-2023) Internship program at the Company

Kancharla Bhaskar completed his training on various jobs on Civil Construction and operation of different Civil Construction Machinery. His attendance and performance during the training was found Excellent.

For DANDA DHARANIDHAR

Proprietor

OFF : 16-11-741/D/22,
MUSARAMBAGH,
HYDERABAD - 500 036
MOBILE : 9440444039, 8374033365
Mail ID : dharanidhar.2008@rediffmail.com

RESI : FLAT NO. 502, SUDHA VAISHNAVI RESIDENCY
MCH NO. : 10-2-309, PLOT NO. : 188, STREET NO. 4,
ROAD NO. 7, WEST MARREDPALLY,
SECUNDERABAD - 500 026.
PHONE : 040 2970 2339

K.HARIDASAN

PHONE 9745598235

12 ' C ' 2013-16

BUILDING & P.W.D. CONTRACTOR

KANAKANIVAS, PALLANCHATHANNUR, PALAKKAD.

Date: 29/7/23

TO WHOMSOEVER IT MAY CONCERN

This is to certify that SARATH.B, S/o. Babu.E, Erumathadathil House, Potta, Pazhayannur, Thrissur has been working under me as a Site Supervisor from 7th July 2023 to 29th July 2023. Within this period I found himself sincere obedient and able to supervise residential and commercial buildings. I wish to him every success in his future assignments.

HARIDASAN. K.
PWD CONTRACTOR
KANAKA NIVAS
PALLANCHATHANOR POST
PALAKKAD - 678 571

A. KAVITHA CONTRACTOR

GST IN : 33BVJPK6456KIZ6
CELL : 88836 73664
98940 77793

Date : ..10.08.2023.....

TO WHO IT MAY CONCERN

This is to Certify that Miss. S.Akshatha (720920103003) has working with us from 01July 2023 to 29 July 2023 and designated as " Supervisor ". During his above tenure we found his service he was punctual, hardworking , sincere man and diligent in his duties and responsibilities and he always interested to learn Site Works . Her work was very satisfactory. We noted that his daily work production & relationship with workers & management was satisfactory.

We wish all the success in his future life

Kavitha Contractor

For A. KAVITHA CONTRACTOR

A. Kavitha

Proprietor

Authorized Signatory

CREATIONS
Engineers & Supervisors
KALLEPULLY
PALAKKAD

PRAVEEN GEORGE M.
Civil Engineering Consultant
Mob : 984 735 4440
Off : 0491 2528565

Ref:

Date 29:07:2023

To Whomsoever It May Concern

This is to certify that DHARANYA. D (D/O) Of DHANDAPANI Velanthavalam (PO) , Palakkad District has been working under me site supervisor from JULY/7/2023 to 29/ 2023 within this period . I founded himself sincei ,, obedientand to the supervise Residential and commercial building . I wish him every success in his future assignment .

PRAVEEN GEORGE. M
Regd. Building Supervisor Senior
Reg. No E-
CREATIONS
KALLEPULLY. PALAKKAD

K.HARIDASAN

PHONE 9745698235

12 ' C ' 2013-16

BUILDING & P.W.D. CONTRACTOR

KANAKANIVAS, PALLANCHATHANNUR, PALAKKAD.

Date: 29/7/23

TO WHOMSOEVER IT MAY CONCERN

This is to certify that SOORYADAS.H, S/o. Haridasan.K, Kadanthodi, Pallanchathanur PO, Palakkad has been working under me as a Site Supervisor from 7th July 2023 to 29th July 2023. Within this period I found himself sincere obedient and able to supervise residential and commercial buildings. I wish to him every success in his future assignments.

HARIDASAN. K.
PWD CONTRACTOR
KANAKA NIVAS
PALLANCHATHANOR POST
PALAKKAD - 678 571

AMIGOS
CONSTRUCTIONS

+91 970435560/ +91 9e4910&5a5

amigosconstructions...kdp@gmail.com

Date: 29th July 2023

INTERNSHIP CERTICATE

This is to certify that Mr. MANGALI SAI KUMAR, student of B.E(Civil Engineering) 4th year (Reg no:720920103317) studying at JCT College of Engineering and Technology, Pichanur, Coimbatore, Tamilnadu, has been successfully completed one month (from 01-07-2023 to 29-07-2023) internship program at the company.

Sai kumar completed his training on various jobs on civil constructions and operation of different civil construction machinery. His attendance and performance during the training was found excellent.

For Amigos constructions,

For AMIGOS CONSTRUCTIONS

Authorized signatory

Office Address:

Amigos Constructions, D. No: 44/35-1-2, A Block,

Prakruthi Nagar, chemmumiapeta (v), Kadapa - 516003

SITE ORIENTED TRAINING PROGRAMME

INDUSTRIAL TRAINING REPORT

Submitted by

M.SAI KUMAR (720920103317)

In partial fulfilment for the award of the degree

Of

BACHELOUR OF ENGINEERING

In

CIVIL ENGINEERING

JCT COLLEGE OF ENGINEERING AND TECHNOLOGY,

PICHANUR, COIMBATORE-641105

ANNA UNIVERSITY: CHENNAI 600 025

NOVEMBER 2023

ANNA UNIVERSITY: CHENNAI 600 025

BONAFIDE CERTIFICATE

Certified that this is the bonafide report on **INDUSTRIAL TRAINING,** presented by **Mr MANGALI SAI KUMAR (720920103317)** Seventh semester B.E. CIVIL Engineering, JCT College of Engineering and Technology, Pichanur, Coimbatore, in partial fulfillment of the requirements for the award of bachelor of Engineering in Civil Engineering under Anna University Chennai 600 025 during the year 2023.

23/11/23

HEAD OF THE DEPARTMENT

Prof.Dr.V.MURUGESH,M.E.,Ph.D,(PDF)
Department of Civil Engineering
JCT College of Engineering and
Technology,Coimbatore.

23/11/23

GUIDED BY

Prof.G.S.HARI.M.E
Assistant Professor
Department of civil Engineering
JCT CET, Coimbatore

Submitted for the Viva-voice held on 23-11-2023

20/11/23

INTERNAL EXAMINER

~~EXTERNAL EXAMINER~~

ACKNOWLEDGEMENT

If words are considered as the symbol of approval and token of acknowledgement, then let words play the heralding role of thanks giving just to glorify to exhibit the deeply embedded feelings of gratitude.

First and foremost, we would like to thank the almighty, through whom all things are possible. This work was done not only by our power, but his spirit.

I would like to place on record my deep sense of gratitude to our chairman **Thiru.R.ARULSELVAN,** JCT College of Engineering and Technology, Pichanur, who has been a source of inspiration and encouragement for the successful completion of my inplant training.

We express our profuse thanks to the principal, **Dr.S.MANOHARAN,M.E,Ph.D,** for his kind permission to do this training.

We are greatly indebted to our head of the department. **Dr.V. MURUGESH, M.E,Ph.D,(PDF)** and all the staffs of Civil Department for their endless encouragement.

I once again thank all those who helped me in doing this training directly or indirectly, and for bringing out this training a very successful one.

Finally, we would like to express our deepest gratitude to our parents. and well-wishers for their understanding, support, love, and patience.

1.1. COMPANY INRODUCTION

AMIGOS is one of the fastest growing group in Infrastructure, Real Estate and Modern Agricultural Farming sectors in Kadapa- AP.

Founded in 2008, named AMIGOS Builders Pvt Ltd Company to provide the QUALITY construction to the people of the then United Andhra Pradesh. Ventured into both construction and contracting business, has built LANDMARK projects in multiple cities namely Andhra Pradesh, Telangana and Karnataka. With just over a decade of experience in the space of construction, they made their mark by completed 6 Projects with a development area of about 11 Lakh square feet comprising of living space as well as Commercial Spaces.

1.2. PROJECT INTRODUCTION

The basics needs of human existences are food, clothing"s & shelter. From times immemorial man has been making efforts in improving their standard of living. The point of his efforts has been to provide an economic and efficient shelter. The possession of shelter besides being a basic, used, gives a feeling of security, responsibility and shown the social status of man. Every human being has an inherent liking for a peaceful environment needed for his pleasant living, this object is achieved by having a place of living situated at the safe and convenient location, such a place for comfortable and pleasant living requires considered and kept in view.

Scope of the project :

Design and construction of multistoried finished houses.

1. 2.1.TYPES OF BUILDINGS :

Buildings are classified on the basis of character of occupancy and type of use as.

1. Residential Building
2. Educational Building
3. Institutional Building
4. Industrial Building
5. Assembly buildings
6. Business buildings
7. Mercantile buildings
8. Storage buildings
9. Hazardous buildings

Residential building: In such building sleeping accommodation is provided. IT includes the living room, bed room, kitchen, hall, toilet and bath room. It may be a single storey building or apartments.

Educational building: These includes any building using for school, college, assembly for instruction, education or recreation.

Institutional building: These building are used for different purposes, such as medical or other treatment or care of a person suffering from a physical or mental illnesses. These building includes hospital, sanatoria, jail etc.

Industrial building: These are buildings in which products or material s of all kind of properties are fabricated, assembled, processed. For example refineries, gas plant, mills etc.

Assembly buildings : These are defined as buildings or parts of them which houses public

gatherings congregated with the intent of amusement, recreation, social, religious, patriotic, civil,

travel or other similar purposes. Buildings such as movie houses, drama theatres, drive-in theatres,

assembly halls, clubhouses, town halls, auditoriums, exhibition halls, museums, mangal karyalayas, gymnasiums, sports complexes, restaurants, boarding houses, dance clubs, gymkhanas, places of worship, bus stops, taxi stands, railway stations, airports, piers, etc. are categorized as assembly buildings

Business buildings : If a building or a part of it is primarily used for keeping records of business transactions, maintaining accounts, bookkeeping purposes or managing other types of records then it can be classified as a business building. Buildings under this category include offices, banks, courthouses and other professional establishments serving the aforementioned purposes.

Mercantile buildings : In these types of buildings, either the entire building or a part of it is used for housing shops, stores or showrooms where display and sale of wholesale goods, retail goods or merchandise is carried out. Such buildings should also accommodate office, storage and service facilities essential for the business which should be located in the same building.

Storage buildings : If a building or a part of it is used for the storage of commodities, goods, merchandise, etc. then it is categorised as a storage building. They comprise buildings such as warehouses, cold storages, grain storage units, barns, stables, freight depot, transit shed, hangars, truck terminals, public garages, etc.

Hazardous buildings : It includes any buildings used for the storage of poisonous substances like pesticides, toxic or noxious alkalis, acids or other chemicals producing explosive or poisonous fumes.

SAFETY INDUCTION

Safety is very important part of any work. An induction video was showed which highlighted the need and importance of safety at construction site. Most accidents can be prevented by taking simple measures or adopting proper working procedures. It is very important to discuss issues on safety and health that should be paid attention to on construction sites for easy reference by the workers. If we work carefully and take appropriate safety measures, there will definitely be fewer work injury cases, and our sites will become a safe and secure place to work in. It is important to educate everyone in the site regarding safety for following purposes.

- Workers safety
- Construction progress
- Standard procedure
- Legal cases
- Working efficiency

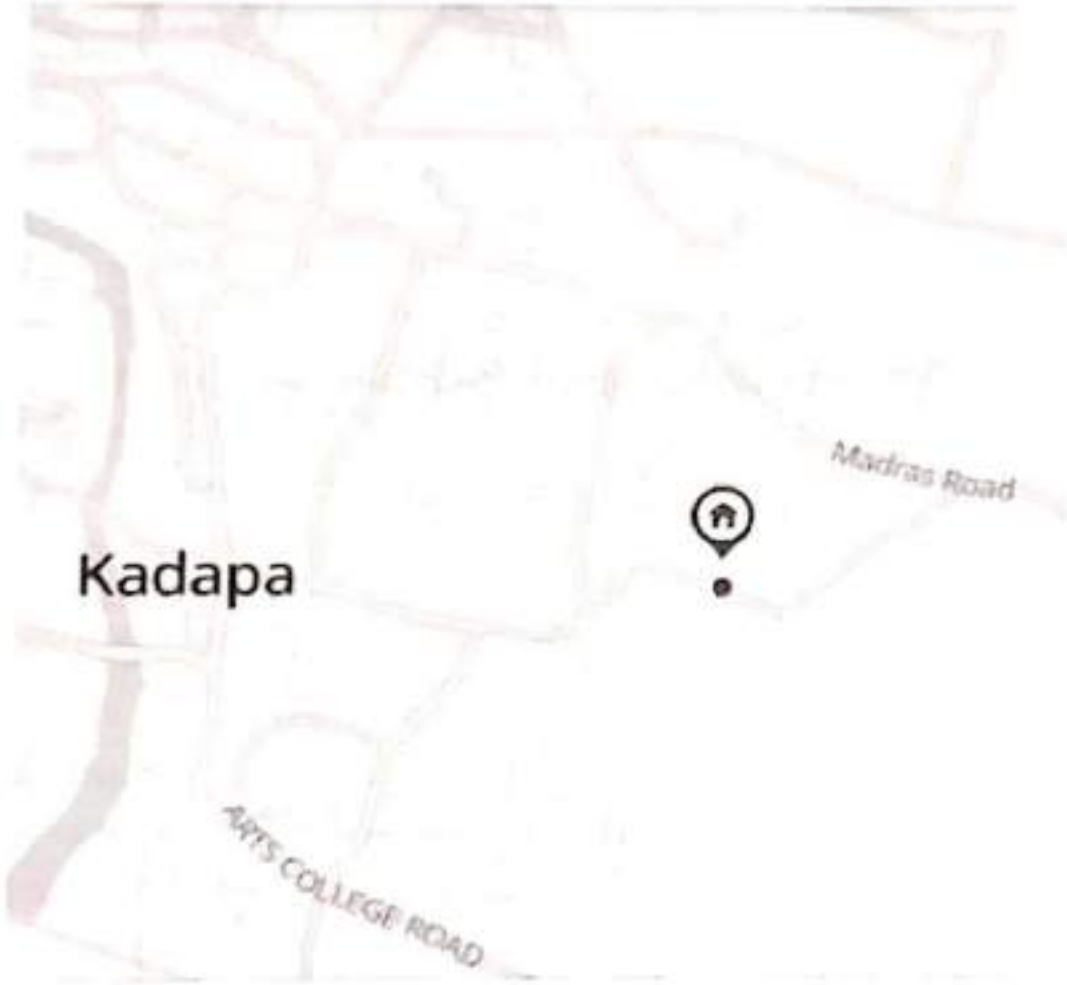
Precautions at site for safety

- ➢ Wear protective equipment.
- ➢ Do not drink or take drugs while working.
- ➢ Pay attention to personal hygiene.
- ➢ Do not play in the workplace.
- ➢ Report to your supervisor immediately if you notice any unsafe condition.

Possible types of accidents and ill health :

- **Construction Site Fall**
- **Crane Accidents**
- **Scaffolding Accidents**
- **Electrical Accidents**
- **Trench Collapses**
- **Fires and Explosions**
- **Welding Accidents**
- **Cutting Accidents**
- **Structure Failure**
- **Building Collapse**
- **Supervisor Negligence**
- **Punch Press Malfunctions**
- **Compressor Accidents**
- **Exploding Compressor**
- **Gas Explosions During Welding**
- **Run-Over by Operating Equipment**
- **Unsafe/ Dangerous Equipment Accidents**

Work Location



SECTION -3

CONSTUCTION STEPS INVOLVED

Sequence of Structure Work

1) Site Clearance
2) Demarcation of Site
3) Positioning of Central coordinate ie (0,0,0) as per grid plan
4) Surveying and layout
5) Excavation
6) Laying of PCC
7) Bar Binding and placement of foundation steel
8) Shuttering and Scaffolding
9) Concreting
10) Electrical and Plumbing
11) Deshuttering
12) Brickwork
13) Doors and windows frames along with lintels
14) Wiring for electrical purposes
15) Plastering
16) Flooring and tiling work
17) Painting
18) Final Completion and handing over the project

3.1.1 Site Clearance:

The very first step is site clearance which involves removal of grass and vegetation along with any other objections which might be there in the site location.

Demarcation of Site :

The whole area on which construction is to be done is marked so as to identify the construction zone. In our project, a plot of 450*350 sq ft was chosen and the respective marking was done.

Surveying and layout :

Survey is the first step done in any construction site so as to get the required level of surface. It is also used in level transferrin during construction of retaining wall. Generally at site survey is carried out by following two instruments.

A-Total station B-Auto level

A-Total Station: A total station is an electronic/optical instrument used in modern surveying and building construction. The total station is an electronic theodolite (transit) integrated with an electronic distance meter (EDM) to read slope distances from the instrument to a particular point. By this instrument we can measure Angle, Distance, Coordinate and also Data Processing. Advantages:

1. The following are some of the major advantages of using total station over the conventional surveying instruments
2. Field work is carried out very fast.
3. Accuracy of measurement is high.
4. Manual errors involved in reading and recording are eliminated.
5. Calculation of coordinates is very fast and accurate. Even corrections for temperature and pressure are automatically made.
6. Computers can be employed for map making and plotting contour and cross-sections. Contour intervals and scales can be changed in no time.

B-Auto level:It is a leveling instrument which was on site checking the elevations of various points.

Auto level is a modified form of dumpy level. We used auto level to transfer the level of ground to retaining wall and setting thickness of slab in which first of all marking was made to fix the level of particular elevations then casting of slab was performed.

Transferring of surface level to retaining wall

1. Set the auto level at the building floor level.
2. Level the instrument.
3. Take the staff reading at point also on floor level surface.

4. Locate the staff on the formwork of retaining wall and adjust the staff in such a way so that reading of staff is same as staff reading in step 3.

Positioning of Central coordinate and layout :

The centre point was marked with the help of a thread and plumb bob as per the grid drawing. With respect to this center point, all the other points of columns were to be decided so its exact position is very critical.

Excavation:

Excavation was carried out both manually as well as mechanically. Normally 1-2 earth excavators (JCB"s) were used for excavating the soil. Adequate precautions are taken to see that the excavation operations do not damage the adjoining structures. Excavation is carried out providing adequate side slopes and dressing of excavation bottom. The soil present beneath the surface was too clayey so it was dumped and was not used for back filling. The filling is done in layer not exceeding 20 cm layer and than its compacted.

Depth of excavation was 5"4" from Ground Level.

PCC – Plain Cement Concrete:

After the process of excavation, laying of plain cement concrete that is PCC is done. A layer of 4 inches was made in such a manner that it was not mixed with the soil. It provides a solid bas for the raft foundation and a mix of 1:5:10 that is, 1 part of cement to 5 parts of fine aggregates and 10 parts of coarse aggregates by volume were used in it. Plain concrete is vibrated to achieve full compaction. Concrete placed below ground should be protected from falling earth during and after placing. Concrete placed in ground containing deleterious substances should be kept free from contact with such a ground and with water draining there from during placing and for a period of seven days. When joint in a layer of concrete are unavoidable, and end is sloped at an angle of 30 and junctions of different layers break joint in laying upper layer of concrete. The lower surface is made rough and clean watered before upper layer is laid.

Laying of Foundation:

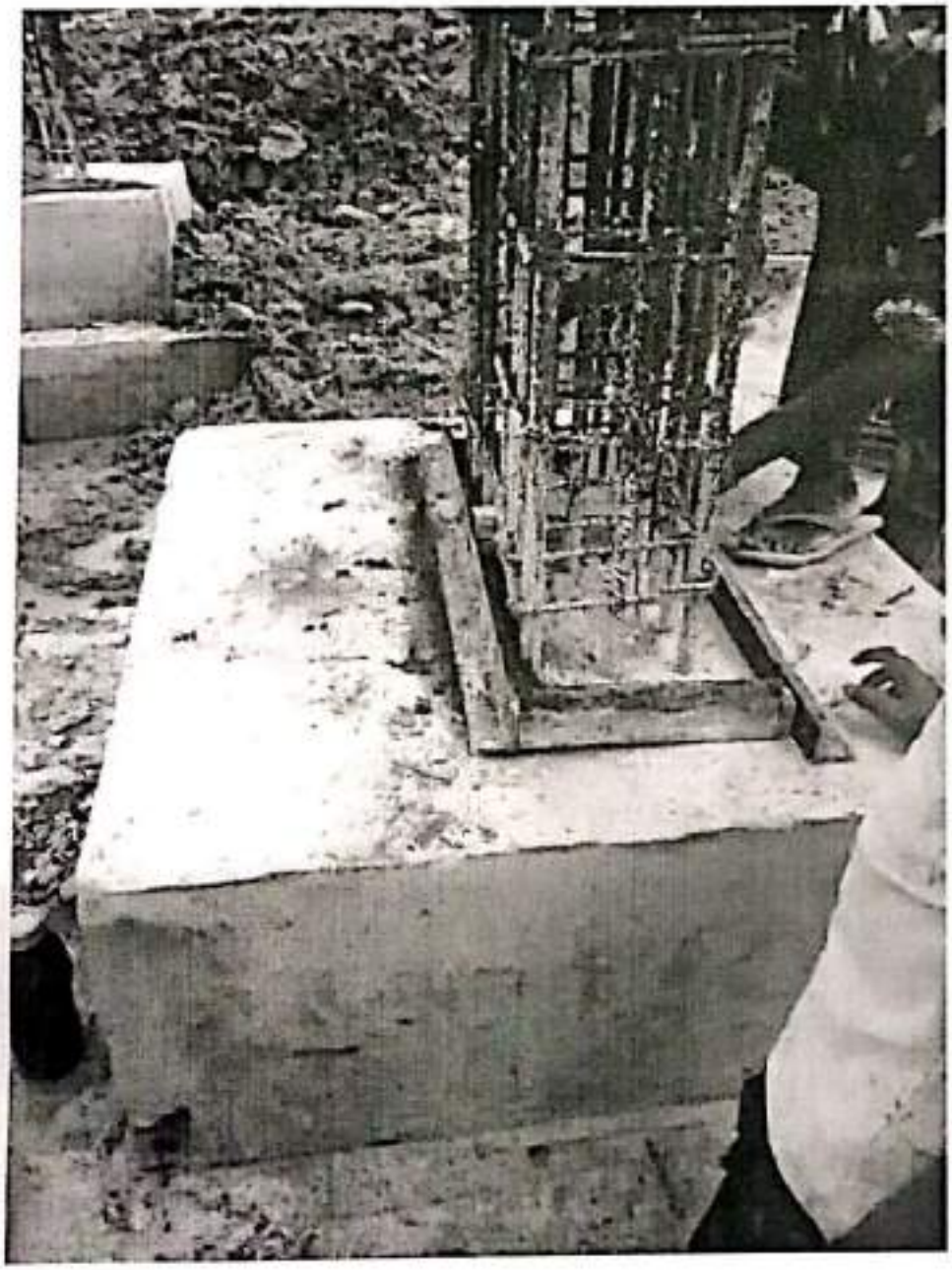
At our site, Raft foundations are used to spread the load from a structure over a large area, normally the entire area of the structure. Normally raft foundation is used when large load is to be distributed and it is not possible to provide individual footings due to space constraints that is they would overlap on each other. Raft foundations have the advantage of reducing differential settlements as the concrete slab resists differential movements between loading positions. They are often needed on soft or loose soils with low bearing capacity as they can spread the loads over a larger area. In laying of raft foundation, special care is taken in the reinforcement and construction of plinth beams and columns. It is the main portion on which ultimately whole of the structure load is to come. So a slightest error can cause huge problems and therefore all this is checked and passed by the engineer in charge of the site.

Apart from raft foundation, individual footings were used. Foundation footings are strips of concrete or filled concrete blocks placed under foundation wall. Gravel or crushed stone footings may also be used. The purpose of footing is to transfer the loads safely in the ground. Generally in high rise buildings three types of footings are provided

Isolated Footing- An isolated footing is used to support the load on a single column. It is usually either square or rectangular in plan. It represents the simplest, most economical type and most widely used footing. Whenever possible, square footings are provided so as to reduce the bending moments and shearing forces at their critical sections. Isolated footings are used in case of light column loads, when columns are not closely spaced. An isolated footing must, therefore, be provided by two sets of reinforcement bars placed on top of the other near the bottom of the footing. In case of property line restrictions, footings may be designed for eccentric loading or combined footing is used as an alternative to isolated footing.

Combined footing- Whenever a column is to be provided near the edge of property and it may not be permissible to extend the footing beyond a certain limit. In such a case, the load on the footing will be eccentric and hence this will result in uneven distribution of load to the supporting soil. Hence, an alternative design would be to provide a common footing to the

edge column and to an interior column close to it. Combined footings under two or more columns are used under closely spaced, heavily loaded interior columns where individual footings, if they were provided, would be either very close to each other, or overlap each other. This footing is called "combined footing".



Construction steps involved

Raft footing or Mat footing:

This is a footing that covers the entire area under the structure. This footing is used when very heavy loads of building are to be transmitted to the underlying soil having very low and differential bearing capacities. Due to its rigidity, it minimizes differential settlement. There are several types of raft foundation in use. The most common types are; the flat slab and the slab-beam types Raft footings are provided in following cases.

- When the ground water table is high, rafts are often placed over piles to control

  buoyancy.
- When isolated footings for column overlap on each other.
- When total area of footing slab is more than50% of total area.
- Where underground flooring is required this type of footing is provided and it serves as footing as well as floor.

PLANNING, ANALYSIS AND DESIGNING OF A LIBRARY BUILDING

A PROJECT REPORT

Submitted by

AGARSH.U	**(720920103301)**
FELIKS ANTONY	**(720920103005)**
MOHAN NARAYANA.J	**(720920103316)**
VISHNU DAS.R	**(720920103008)**

In partial fulfillment for the award of the degree

of

BACHELOR OF ENGINEERING

IN

CIVIL ENGINEERING

JCT COLLEGE OF ENGINEERING AND TECHNOLOGY

PICHANUR, COIMBATORE - 641105

ANNA UNIVERSITY: CHENNAI 600 025

NOVEMBER 2023

PLANNING, ANALYSIS AND DESIGNING OF MULTI - STOREYED RESIDENTIAL BUILDING

A PROJECT REPORT

Submitted by

DEEKSHITA B	**(720920103306)**
DHARANYA D	**(720920103307)**
DIVYA N	**(720920103308)**
DADDALA VAISHNAVI	**(720920103310)**

In partial fulfillment for the award of the degree of

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NOVEMBER 2023

PLANNING, DESIGNING AND ANALYSIS OFA BOYS HOSTEL BUILDING

A Design Project Report

Submitted by

ABILASH NARAYANAN J	**720920103001**
ABHISHEK V K	**720920103002**
AKHIL RAJ C S	**720920103302**
GOUTHAM KRISHNA U	**720920103327**

In partial fulfilment of the requirements for the award of the degree

Of

BACHELOR OF ENGINEERING

In

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JCT COLLEGE OF ENGINEERING AND TECHNOLOGY

COIMBATORE

ANNA UNIVERSITY: CHENNAI 600 025
NOVEMBER 2023

PLANNING, ANALYSIS AND DESIGN OF MARRIAGE-HALL IN STEEL STRUCTURE

A PROJECT REPORT

Submitted by

AKSHATHA S	**(720920103003)**
FATHIMA ROSNA K	**(720920103004)**
KANCHARLA BHASKAR	**(720920103314)**
YAMUNA B	**(720920103325)**

In partial fulfillment for the award of the degree of

BACHELOR OF ENGINEERING

IN

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PICHANUR, COIMBATORE - 641105

ANNA UNIVERSITY: CHENNAI 600 025

NOVEMBER 2023

EXPERIMENTAL STUDY ON THE PARTIAL REPLACEMENT OF FLUORESCENT LAMP WASTE WITH FINE AGGREGATE AND COARSE AGGREGATE WITH RUBBER CRUMB IN CONCRETE

A PROJECT REPORT

Submitted by

YAMUNA.B	(720920103325)
SAI KUMAR.M	(720920103317)
FELIX ANTONY	(720920103305)

in partial fulfillment for the award of the degree

of

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JCT COLLEGE OF ENGINEERING AND TECHNOLOGY, PICHANUR

ANNA UNIVERSITY: CHENNAI 600 025

MAY 2024

EXPERIMENTAL INVESTIGATION ON E-WASTE FIBRE CONCRETE

A PROJECT REPORT

Submitted by

AKSHATHA S	**(720920103003)**
AGARSH. U	**(720920103301)**
VISHNUDAS.R	**(720920103008)**
SARATH. B	**(720920103006)**

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CIVIL ENGINEERING

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PICHANUR, COIMBATORE - 641105

ANNA UNIVERSITY: CHENNAI 600 025

MAY 2024

EXPERIMENTAL STUDY ON PARTIAL REPLACEMENT OF FINE AGGREGATE BY COPPERSLAG AND CEMENT BY MUSSELSHELL POWDER IN PAVEMENT BLOCKS

A PROJECT REPORT

Submitted by,

ABHILASH NARAYANAN J (720920103001)

DIVYA N (720920103308)

GOUTHAM KRISHNA U (720920103327)

In partial fulfillment for the award of the degreeof

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PICHANUR, COIMBATORE -641105

ANNA UNIVERSITY: CHENNAI 600 025

APRIL 2024

EXPERIMENTAL INVESTIGATION ON REPLACEMENT OF CEMENT AND FINE AGGREGATE USING PLASTIC WASTE ASH AND SILICA SAND IN CONCRETE

A PROJECT REPORT

Submitted by

ABHISHEK V K	(720920103002)
DEEKSHITA B	(720920103306)
DADDALA VAISHNAVI	(720920103310)

In partial fulfillment for the award of the degree of

BACHELOR OF ENGINEERING

IN

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JCT COLLEGE OF ENGINEERING AND TECHNOLOGY

PICHANUR, COIMBATORE - 641105

ANNA UNIVERSITY: CHENNAI 600 025

MAY 2024

EXPERIMENTAL INVESTIGATION OF CONCRETE BY PARTIAL REPLACEMENT OF CEMENT WITH WHA

A PROJECT REPORT

Submitted by,

FATHIMA ROSNA K **(720920103004)**

ARAVINTHAN S **(720915103303)**

MOHAN NARAYANA J **(720920103316)**

In partial fulfillment for the award of the degree

of

BACHELOR OF ENGINEERING

IN

CIVIL ENGINEERING

JCT COLLEGE OF ENGINEERING AND TECHNOLOGY

PICHANUR, COIMBATORE -641105

ANNA UNIVERSITY: CHENNAI 600 025

APRIL 2024

EXPERIMENTAL STUDY ON CONCRETE WITH THE PARTIAL REPLACEMENT OF CEMENT BY GLASS AND EGG SHELL POWDER

A PROJECT REPORT

Submitted by

AKHILRAJ C. S	720920103302
DHARANYA. D	720920103307
KANCHARLA BHASKAR	720920103314
SOORYADAS .H	720920103320

In partial fulfillment for the award of the degree of

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PICHANUR, COIMBATORE - 641105

ANNA UNIVERSITY: CHENNAI 600 025

MAY 2024

EXPERIMENTAL INVESTIGATION ON FIBRE REINFIORCED CONCRETE BY PARTIAL REPLACEMENT OF CEMENT USING METAKAOLIN AND FINE AFGGREGATE USING QUARRY DUST

A PROJECT REPORT (PHASE II)

Submitted by

NIYAZ T
(720922413006)

in partial fulfilment for the award of the degree

of

MASTER OF ENGINEERING

in

STRUCTURAL ENGINEERING

JCT COLLEGE OF ENGINEERING AND TECHNOLOGY

COIMBATORE - 641 105

DEPARTMENT OF CIVIL ENGINEERING

ANNA UNIVERSITY CHENNAI: CHENNAI - 600 025

AUGUST 2024

AN EXPERIMENTAL INVESTIGATION ON CONCRETE MANUFACTURED BY PARTIAL REPLACEMENT OF M-SAND WITH WASTE FOUNDRY SAND AND BY ADDING POLYCARBOXYLATE ETHER

A PROJECT REPORT (PHASE II)

Submitted by

MANOJKUMAR S

(720922413004)

in the partial fulfilment of the award of the degree of

MASTER OF ENGINEERING

in

STRUCTURAL ENGINEERING

JCT COLLEGE OF ENGINEERING AND TECHNOLOGY

COIMBATORE-641 105

DEPARTMENT OF CIVIL ENGINEERING

ANNA UNIVERSITY CHENNAI: CHENNAI 600 025

AUGUST 2024

COMPARATIVE STUDY ON HYPOSLUDGE BRICK WITH CONVENTIONAL BRICK

A PROJECT REPORT (PHASE II)

Submitted by

PRANAV P S

(720922413007)

in the partial fulfilment of the award of the degree of

MASTER OF ENGINEERING

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JCT COLLEGE OF ENGINEERING AND TECHNOLOGY

COIMBATORE-641105

DEPARTMENT OF CIVIL ENGINEERING

ANNA UNIVERSITY, CHENNAI-600 025

AUGUST 2024

EXPERIMENTAL STUDY ON HIGHTEMPERATURE MESS CONFINED CONCRETE

APROJECT REPORT(PHASE-II)

Submitted by

SIVAVENKATRAMAN N

(720922413008)

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MASTER OF ENGINEERING

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JCT COLLEGE OF ENGINEERING AND TECHNOLOGY

COIMBATORE-641105

DEPARTMENT OF CIVIL ENGINEERING

ANNA UNIVERSITY, CHENNAI-600 025

AUGUST 2024

EXPERIMENTAL STUDY OF REPLACEMENT OF SAND BYPLASTICAGGREGATEINCONCRETE

PROJECT REPORT (PHASE II)

Submitted by

GOWTHAM T

720922413003

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MASTER OF ENGINEERING

IN

STRUCTURAL ENGINEERING

JCT COLLEGE OF ENGINEERING AND TECHNOLOGY

COIMBATORE-641105

DEPARTMENT OF CIVIL ENGINEERING

ANNA UNIVERSITY, CHENNAI

AUGUST 2024

COMPUTER SCIENCE AND BUSINESS SYSTEMS

JCT College of Engineering and Technology

Approved by AICTE, New Delhi, Affiliated to Anna University, Chennai & Accredited by NAAC
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ACCREDITED BY NBA ACCREDITED Engineering 4 Courses PCE | EEE MECH | CSE NAAC A Grade

YEAR / SEM **IV / VIII** **PROJECT BATCH** **CSBS (2022-23)**

Batch	Reg.No	Name of the Student	Name of the Guide	Project Title	TIME
1	720920244004	ANUSHA U K	Dr.K.MALARVIZHI	EMAIL SPAM DETECTION USING MACHINE LEARING	9.30 AM TO 9.45 AM
	720920244013	SUJITH P A			
	720920244018	VISMAYA V V			
2	720920244006	BHAVYA K B	Prof.J.ARUN	REMOTE PATIENT MONITORING SYSTEM USING IOT	9.45 AM TO 10.00 AM
	720920244011	RAHUL VIJAY			
	720920244015	VIKRAM M			
3	720920244012	RANJITH B	Prof.R.BHUVANESHWARI	AUTISM SPECTRUM DETECTION USING MACHINE LEARNING	10.00 AM TO 10.15 AM
	720920244017	VISHNU DEV K			
	720920244302	NIZNIYA HENNA K T			
4	720920244002	ADITHYA P S	Prof.K.RAJ KUMAR	AI BASED FRUIT CLASSIFICATION AND CALORIES MEASUREMENT USING DEEP LEARNING TECHNIQUES	10.15 AM TO 10.30 AM
	720920244007	KABILAN K			
	720920244016	VISHNU P V			
5	720920244001	ABHAY M DAS	Dr.K.MALARVIZHI	SMART IRRIGATION SYSTEM	10.30 AM TO 10.45 AM
	720920244014	THUNGA NAVEEN			
	720920244701	JOSEPH			
6	720920244304	DEEPAK GIRISH	Prof.R.BHUVANESHWARI	EFFICIENT MOBILE OBJECT DETECTION WITH TENSORFLOW LITE	10.45 AM TO 10.11 AM
	720920244303	SALIM U			
	720920244009	NAVAZ SHERIEF			

Prof. Arun J
PROJECT COORDINATOR

Prof. K Malarvizhi
HOD

Dr.S.Manoharan
PRINCIPAL

EMAIL SPAM DETECTION USING MACHINE LEARNING

A PROJECT REPORT

Submitted by

ANUSHA U K 720920244004

SUJITH P A 720920244013

VISMAYA V V 720920244018

in a partial fulfillment for the award of degree

of

BACHELOR OF TECHNOLOGY

IN

COMPUTER SCIENCE AND BUSINESS SYSTEMS

JCT COLLEGE OF ENGINEERING AND TECNOLOGY
PICAHANUR, COIMBATORE

ANNA UNIVERSITY: CHENNAI 600025

MAY 2024

ANNA UNIVERSITY: CHENNAI 600025

BONAFIDE CERTIFICATE

Certified that this project report **"EMAIL SPAM DETECTION USING MACHINE LEARNING"** is the bonafide work of **"ANUSHA UK, SUJITH PA and VISMAYA VV"** who carried out the project work under my supervision.

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Submitted for the project viva-voice examination held on 10/5/24

INTERNAL EXAMINER

EXTERNAL EXAMINER

ABSTRACT

Email spam remains a pervasive challenge in the digital landscape, necessitating innovative solutions to bolster the effectiveness of message filtering systems. This project solves into the application of machine learning (ML) for email spam message filtering. The aim of the project is to develop a robust and adaptive approach to discern between legitimate and unwanted content. The methodology involves the extraction of diverse features from incoming emails, including sender information, textual content, and contextual cues. These features serve as input for a machine learning model, which is trained on labeled datasets containing examples of both spam and non-spam messages.

The ML model's dynamic learning capabilities are a focal point, enabling it to continuously evolve its understanding of spam patterns. Through iterative training processes, the model refines its predictive accuracy and adapts to emerging spam tactics, thereby enhancing its overall performance. The system's effectiveness is measured not only by its ability to accurately filter out spam messages but also by its capacity to minimize false positives and negatives, ensuring that legitimate messages are not erroneously flagged or permitted. The outcomes of this project is to find the advancement of email security measures, offering a more resilient and responsive solution to the persistent challenge of spam messages.

In evaluating the outcomes of the email spam detection system, the emphasis lies on its adaptability and real-time responsiveness. The machine learning model's continuous learning mechanism proves instrumental in addressing the evolving tactics employed by spammers. As new patterns and trends emerge, the model autonomously adjusts its parameters, ensuring that the system remains effective against sophisticated and previously unseen spam techniques. This adaptability not only enhances the accuracy of spam classification but also contributes to the system's ability to promptly detect and mitigate novel threats. Consequently, users benefit from an email spam detection system that not only evolves with the threat landscape but also provides a proactive shield against emerging spam challenges, ultimately fortifying the resilience of digital communication channels.

REMOTE PATIENT MONITORING SYSTEM USING IOT

A PROJECT REPORT

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INTERNAL EXAMINER 10/5/24

EXTERNAL EXAMINER

ABSTRACT

Remote Patient Monitoring (RPM) systems utilizing Internet of Things (IoT) technology have emerged as a game-changer in healthcare, transcending traditional boundaries of patient care. By leveraging sensors and wearable devices, these systems continuously track patients' vital signs and health metrics, transmitting real-time data to healthcare providers. This enables timely interventions and personalized care, ultimately leading to improved patient outcomes and reduced healthcare costs through proactive monitoring.

The seamless integration of IoT in Remote Patient Monitoring empowers patients to actively engage in managing their health. Through connected devices, patients can monitor their physiological parameters and medication adherence in real-time, facilitating self-care and promoting treatment compliance. Healthcare providers, equipped with comprehensive patient data, can remotely assess health status, detect deviations, and intervene promptly, thus preventing exacerbations of chronic conditions and reducing hospital admissions.

Moreover, Remote Patient Monitoring systems fueled by IoT technology enhance healthcare accessibility, particularly in underserved regions. Patients in rural areas or those with limited access to specialized medical care can benefit from remote consultations and monitoring, eliminating geographical barriers. The objectives of the proposed system utilize wearable or non-invasive sensors to continuously collect real-time health data from individuals. These sensors are capable of measuring temperature, SpO2 levels, and heartbeat accurately and non-invasively.

Key Words:-Remote Patients, IoT, Health Care, Accuracy and Monitoring.

AUTISM SPECTRUM DETECTION USING MACHINE LEARNING

A PROJECT REPORT

Submitted by

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10/5/24

INTERNAL EXAMINER

EXTERNAL EXAMINER

ABSTRACT

Autism spectrum disorder is a neurological developmental disorder that affects person's interaction, communication and learning skills. The effects of Autism Spectrum Disorder and the severity of symptoms are different in each person, mainly this disorder is recognized between the age of 1-5 years and above and the symptoms they have are unusual behaviors, interests and also they might have social challenges. If it was not resolved at starting stage it becomes severe in upcoming days, so in order to reduce the number of cases increasing due toAutism. Autism can be predicted at quite early stage using different machine learning techniques. In our proposed work, we are going to predict outcomes of Autism diagnosed in children between age group of 1-5 years and above, in addition of assess and implementation of various models of machine learning. We have used a step-by-step approach to analyze the data of past decade. The predicted data of patient with Autism and non- Autism will be observedas new data and will be used for observing results for forthcoming patients. We are using different Machine Learning Algorithms such as Support vector machine, logistic regression, Random Forest Algorithm to predict the Autism Spectrum Disorder. Once the former has beenimplemented, we will extend our project to showcase some advanced features so that accuracywill be maintained.

Various classifications techniques were then implemented to transformed ASD datasets, While online dataset gave best results for children datasets. After the analysis to identifythe risk factor in children the results of the approaches indicates that machine learning methodscan provide good predictions of ASD status .This suggests that it may possible to apply thesemodels for the detection of ASD in early stages

The major part of the existing literature on autism spectrum disorder is covered by a predictionsystem based on traditional machine learning algorithms such as support vector machine, random forest, In the evaluating outcomes of autism spectrum disorder the emphasis lies on accuracy and real time responsiveness

The best results were obtained by using the support vector machine algorithm as it performs better than other traditional machine learning algorithms. The achieved accuracyis 99.5%.

AI BASED FRUIT CLASSIFICATION AND CALORIES MEASUREMENT USING DEEP LEARNING TECHNIQUES

A PROJECT REPORT

Submitted by

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INTERNAL EXAMINER

EXTERNAL EXAMINER

ABSTRACT

The great measures of calories to stay away from different illnesses. The Standard admission of various calories is basic for keeping the correct equilibrium of calories in the human body. In this paper, a web-based application for estimating fruit calories and improving individual's utilization propensities for wellness is developed. A calorie portion of a fruit is distinguished utilizing standard picture dataset utilizing various advances such as pre-processing, segmentation, feature extraction, training and classification using shape and size with the help of machine learning techniques. fruit object dimensions are determined using image processing techniques.

To estimate the calories in the given fruit and provide the users, patients with optimum solutions for fruit intake. The analysis of different calorie estimation techniques is presented. In this work we aimed to prepare a solution of this problem. Our Work is to first determine the Category of food and after predicting the category of Food (Fruit or Vegetable) Our System determining the Category of that Image (Either the Image is in the Category of Food or Vegetable) After Determining these Things We are predicting the Calorie of that Food as well. Our Work is totally based on the Algorithm named as MobileNet. MobileNet is the Conjunction or the Deep learning and Transfer Learning that is used to recognize the image and based on the image it will Identify the Category. Our System Comprises with several segmentation and image parameters as well.

AI-based fruit classification and calories measurement system using deep learning techniques encapsulates the core essence and objectives of the project. It outlines the innovative approach of employing artificial intelligence, specifically deep learning, to classify fruits and estimate their caloric content. The abstract highlights the significance of the system in addressing dietary needs and promoting healthy eating habits by providing accurate information about the nutritional value of fruits. Additionally, it may mention the potential applications of the system in various domains such as healthcare, nutrition, and food industry, emphasizing its versatility and practical relevance. Overall, the abstract serves as a concise summary that captures the essence of the project and piques the interest of readers by showcasing its novelty, relevance, and potential impact.

SMART IRRIGATION SYSTEM USING IOT

A PROJECT REPORT

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INTERNAL EXAMINER

EXTERNAL EXAMINER

ABSTRACT

Agriculture is an integral part of Indian economy. Over 60% of Indian population based upon agriculture and one third of the income of nation arises from agricultural practices. Hence it plays a vital role in the development of the country. Various issues related to farming is continuously hampering the development of the country.

In sprinkler irrigation, water is piped into one or more central locations within the field and distributed by overhead high-pressured water devices. Micro irrigation is a system that distributes water under low pressure through a piped network and applies it as a small discharge to each plant.

Suitable solution for these problems is to opt for modernized agriculture that comprises of modern trends. Hence, agriculture can be made smart using IoT and other technologies. Smart agriculture increases crop yield, decreases water wastage by switching ON and OFF the motor automatically by measuring the Moisture level of the land. This project also contains an android mobile app providing an easy access of information to the farmer. Moreover, this project presents a smart irrigation system that optimizes water usage. So, have to brought- in an innovative project for the welfare of farmers and also for the farms.

KEYWORD - Iot, Smart Agriculture, Soil Moisture, Node Mcu, Motor

EFFICIENT MOBILE OBJECT DETECTION WITH TENSORFLOW LITE

A PROJECT REPORT

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MAY 2024

ANNA UNIVERSITY: CHENNAI 600025
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Internal Examiner

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ABSTRACT

Mobile object detection has become an important research area due to its various practical applications. In this paper, we propose a deep learning-based approach for mobile object detection using TensorFlow Lite. We use a deep neural network with multiple convolutional layers to extract features from the input image. The extracted features are then fed to a set of detection heads to predict the bounding boxes and corresponding class labels of the objects in the image. We use the MobileNetV2 architecture as our backbone network, and the SSD (Single Shot Detector) algorithm as our detection framework. Our approach achieves high accuracy and real-time performance on mobile devices. We evaluate our approach on several popular object detection datasets, and demonstrate that it outperforms existing state-of-the-art approaches.

Efficient deployment of complex object detection models on resource-constrained mobile devices remains a significant challenge. TensorFlow Lite (TFLite) emerges as a powerful solution for deploying machine learning models on mobile and embedded devices. In this paper, we present strategies for achieving efficient object detection on mobile platforms using TensorFlow Lite. Our exploration includes techniques such as model quantization, network architecture optimization, and hardware acceleration. These strategies aim to improve inference speed and reduce model size without compromising accuracy. Through experiments on popular object detection datasets, we showcase significant improvements in inference speed and memory footprint compared to traditional approaches.

The findings contribute to making object detection accessible on resource-constrained mobile devices, opening up new possibilities for real-time applications in various domains. The implications of our research extend to diverse fields such as autonomous driving, surveillance, and augmented reality. By leveraging TensorFlow Lite and optimizing our approach for mobile deployment, we pave the way for efficient and accurate object detection solutions that can operate seamlessly on mobile devices with limited computational resources.

Internship Students List-Computer Science and Business Systems-(2023-24)

Sl. No.	Title of the collaborative activity	Name of the collaborating agency with contact details	Name of the participant	Year of collaboration	Duration
1	Web Development	The Website Makers	ABIRAM K B	2023-2024	20.06.2023 to 20-07-2023
2	Web3 and Block Chain	Zindot	ADHARSH S	2023-2024	23.07.2023 to 24.08.2023
3	Web3 and Block Chain	Zindot	AKASH A	2023-2024	23.07.2023 to 24.08.2023
4	Web Development	The Website Makers	AMAL KRISHNA M U	2023-2024	20.08.2023 to 20.09.2023
5	Web Development	Skill Vertex	AMBATI CHARAN KUMA	2023-2024	05.08.2023 to 05.09.2023
6	Web Development	The Website Makers	ANAGHA T J	2023-2024	20.06.2023 to 20.07.2023
7	Data Science	Skill Vertex	ARAVA SAI CHARAN	2023-2024	27.05.2023 to 27.06.2023
8	Web3 and Block Chain	Zindot	ASWIN K	2023-2024	23.07.2023 to 24.08.2023
9	Web Development	The Website Makers	ATHUL KRISHNAN VR	2023-2024	20.08.2023 to 20.09.2023
10	Web Development	Teachnook	AVULA MALLA REDDY	2023-2024	01.08.2023 to 30.09.2023
11	React JS Developer	Skill Safari	CHANDRU R	2023-2024	27.05.2023 to 27.06.2023
12	Full Stack Web Development	Pentech e Learning	DEVARAKONDA MADHU	2023-2024	27.07.2023 to 27.08.2023
13	Web3 and Block Chain	Zindot	DEVIKA LAL G B	2023-2024	23.07.2023 to 24.08.2023
14	Web Development	The Website Makers	DHARSHAN S	2023-2024	07.08.2023 to 07.09.2023
15	Web Development	The Website Makers	FAISAL M U	2023-2024	20.06.2023 to 20.07.2023
16	React JS Developer	Skill Safari	GOGULA JAYAKRISHNA	2023-2024	27.05.2023 to 27.06.2023
17	React JS Developer	Skill Safari	GUDA OBULA MAHIDHA	2023-2024	27.05.2023 to 27.06.2023
18	Data Science	Skill Vertex	GUDI NARESH	2023-2024	05.08.2023 to 05.09.2023
19	Web Development	Skill Vertex	GUNENDRA K	2023-2024	27.06.2023 to 27.07.2023
20	Java Live Project	Skill Vertex	GURRAM KAVYA	2023-2024	27.06.2023 to 27.07.2023
21	Digital Marketing	Skill Vertex	JERIPITI VENKATA TARU	2023-2024	27.06.2023 to 27.07.2023
22	Full Stack Web Development	Pentech e Learning	KALLU CHINNAVARUN	2023-2024	27.07.2023 to 27.08.2023
23	Data Science	Skill Vertex	KASTURI ROHITH	2023-2024	27.05.2023 to 27.06.2023
24	Web Development	Skill Vertex	KOMMINENI SAI CHAND	2023-2024	27.06.2023 to 27.07.2023
25	Web Development	Skill Vertex	KRANTHI K	2023-2024	27.06.2023 to 27.07.2023
26	Data Science	Skill Vertex	KURUVA GANGADHR	2023-2024	27.06.2023 to 27.07.2023
27	Full Stack Web Development	Pentech e Learning	MARRIPUDI ANIL TEJA	2023-2024	27.07.2023 to 27.08.2023
28	Web Development	The Website Makers	MISHAL K JALEEL	2023-2024	20.06.2023 to 20-07-2023
29	React JS Developer	Skill Safari	MOHAMMED SAFAR R	2023-2024	27.05.2023 to 27.06.2023
30	React JS Developer	Skill Safari	MUHAMMED MIDLAJ R	2023-2024	27.05.2023 to 27.06.2023
31	Web Development	The Website Makers	MUHAMMED NIHAL K P	2023-2024	07.08.2023 to 07.09.2023
32			NAGARAJ.S	2023-2024	
33	Data Science	Skill Vertex	NAVANEEDHA KRISHNA	2023-2024	27.06.2023 to 27.07.2023
34	Web3 and Block Chain	Zindot	NIVED KRISHNAN V R	2023-2024	23.07.2023 to 24.08.2023
35	Web Development	The Website Makers	PRABITHA N P	2023-2024	20.06.2023 to 20.07.2023
36	Web Development	Teachnook	VULLI PREM KUMAR	2023-2024	01.08.2023 to 30.09.2023
37	Web Development and Designing	OASIS INFOBYTE	PUTCHAKAYALA DIVYA	2023-2024	25.07.2023 to 25.08.2023
38	Data Science	Skill Vertex	RAMIREDDY HARI KRISI	2023-2024	27.06.2023 to 27.07.2023
39	Web3 and Block Chain	Zindot	RANGA RAJAN M	2023-2024	23.07.2023 to 24.08.2023
40	Web Development	The Website Makers	RANJITH M	2023-2024	20.06.2023 to 20-07-2023
41	AI/ML Programming	InTernPe	RAVIVARMAN M	2023-2024	09.10.2023 to 05.11.2023

42	React JS Developer	Skill Safari	RITVIK RAMACHANDRA	2023-2024	27.05.2023 to 27.06.2023
43	Web3 and Block Chain	Zindot	SANDRA SURESH	2023-2024	23.07.2023 to 24.08.2023
44	Web Development	Teachnook	SHAIK ASIF	2023-2024	01.08.2023 to 30.09.2023
45	Web Development	Skill Vertex	SHAIK BABJI	2023-2024	27.05.2023 to 27.06.2023
46	Data Science	Skill Vertex	SHAIK RIZWANA	2023-2024	27.06.2023 to 27.07.2023
47	React JS Developer	Skill Safari	SHIBIL RAHMAN MB	2023-2024	27.05.2023 to 27.06.2023
48	Web Development	The Website Makers	SIDHARTH N	2023-2024	20.08.2023 to 20-09-2023
49	Web Development	The Website Makers	SREERAJ VARMA R	2023-2024	20.08.2023 to 20.09.2023
50	Web Development	The Website Makers	SRUDHINA M S	2023-2024	20.06.2023 to 20.07.2023
51	Web Development	Teachnook	THANGAM CHARANESW	2023-2024	01.08.2023 to 30.09.2023
52	Web3 and Block Chain	Zindot	VAISHNAVI A	2023-2024	23.07.2023 to 23.08.2023
53	Web Development	The Website Makers	VASANTH L	2023-2024	01.08.2023 to 30.09.2023
54	Web Development	The Website Makers	VASANTHAN K	2023-2024	01.08.2023 to 30.09.2023

Certificate ID: TWM_vmd18iy

The Website Makers

CERTIFICATE OF INTERNSHIP

This internship program certificate is proudly awarded to

ABHIRAM KB

Successfully Completed Web Development Internship Program at THE WEBSITE MAKERS, from 20-06-2023 to 20-07-2023.

CEO & Co-Foundor

Verification At

www.thewebsitemakers.in

www.zindot.in

Certificate of Appreciation

This is to certify that

ADHARSH S

student of

JCT COLLEGE OF ENGINEERING AND TECHNOLOGY

has successfully completed 28 days Internship Training in **WEB3 AND BLOCKCHAIN** from **23 JULY, 2023** at Zindot, Kochi. During the internship period we found him/her a sincere, honest, hardworking, dedicated student with a professional attitude and very good professional knowledge.

Director
Zindot

Date : 20 AUG, 2023

www.zindot.in

Certificate of Appreciation

This is to certify that

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student of

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has successfully completed 28 days Internship Training in **WEB3 AND BLOCKCHAIN** from **23 JULY, 2023** at Zindot, Kochi. During the internship period we found him/her a sincere, honest, hardworking, dedicated student with a professional attitude and very good professional knowledge.

Director
Zindot

Date : 20 AUG, 2023

Certificate ID: TWM_te44tAa

The Website Makers

CERTIFICATE OF INTERNSHIP

This internship program certificate is proudly awarded to

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CEO & Co-Founder

Verification At

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Skill VERTEX

CERTIFICATE

OF TRAINING COMPLETION

THIS CERTIFICATE IS PROUDLY PRESENTED TO

AMBATI CHARAN KUMAR REDDY

This is to certify that the above mentioned candidate has successfully completed His/her Training in **WEB DEVELOPMENT** from 5th August to 5th September 2023

During this course he/she showed diligence, consistency, determination, active participation and innovation throughout their training period.

Mayank Gathole
(Academic Head)

Student UIN : SV232791

Certificate no. : RA233291

Certificate ID: TWM_kkp45yi

The Website Makers

CERTIFICATE OF INTERNSHIP

This internship program certificate is proudly awarded to

Anagha TJ

Successfully Completed Web Development Internship Program at THE WEBSITE MAKERS, from 20-06-2023 to 20-07-2023.

CEO & Co-Founder

SEAL

Verification At

www.thewebsitemakers.in

Skill

CERTIFICATE

THIS CERTIFICATE IS PROUDLY PRESENTED TO

ARAVA SAI CHARAN

This is to certify that the above mentioned candidate has successfully completed his/her training in **DATA SCIENCE** from **27th May 2023 to 27th June 2023.**

During this course he/she showed diligence, consistency, determination, active participation and innovation throughout their training period.

Mayank Gathole
(Academic Head)

Student UIN : SV231090

Certificate no. : RA231590

www.zindot.in

Certificate of Appreciation

This is to certify that

ASWIN K

student of

JCT COLLEGE OF ENGINEERING AND TECHNOLOGY

has successfully completed 28 days Internship Training in **WEB3 AND BLOCKCHAIN** from **23 JULY, 2023** at Zindot, Kochi. During the internship period we found him/her a sincere, honest, hardworking, dedicated student with a professional attitude and very good professional knowledge.

Director
Zindot

Date : 20 AUG, 2023

Certificate ID: TWM_tet84Aa

The Website Makers

CERTIFICATE OF INTERNSHIP

This internship program certificate is proudly awarded to

ATHUL KRISHNAN V R

Successfully Completed Web Development Internship Program at THE WEBSITE MAKERS, from August to September 2023.

CEO & Co-Founder

Verification At

Teachnook
STARTING POINT FOR YOUR CAREER PATH

THE TECHNO - MANAGEMENT FEST
WISSENAIRE

Certificate of Course Completion

Avula Malla Reddy

has successfully completed Web Development
with Teachnook from 01/08/2023 to 30/09/2023

During this course, the student has found to be keen and enthusiastic Candidate.

Academic Head

Sr. HR Manager

Verified Certificate

A Verified Certificate from Teachnook can provide a proof for a student or other institution, an employer or other institution, that you have successfully completed an online course

Certificate ID : TNINTC23-6933
Date 12/10/2023

Certificate ID: FSDI23B03

CERTIFICATE

of Completion

This certificate is Presented to

CHANDRU R

for having successfully completed the **"REACT JS DEVELOPER INTERNSHIP PROGRAM"** at **Skill Safari**. We also acknowledge that he/she has successfully all the assigned tasks and projects with the grade of **'A+'.**

Mr Naveen Chandran
Founder & Director, Skill Safari
Skill Safari

Mr Sai Kishore B K
Founder & Director, Skill Safari
www.skillsafari.in

Pantech e Learning
DIGITAL LEARNING SIMPLIFIED

CERTIFICATE

OF INTERNSHIP

Ministry of MSME, Govt. of India

This is to Certify that

DEVARAKONDA MADHU SAI

COMPUTER SCIENCE & BUSINESS SYSTEM

JCT COLLEGE OF ENGINEERING AND TECHNOLOGY,COIMBATORE TAMIL NADU

has Successfully Completed the 1 Month Internship on

Full Stack Web Development

at Pantech e learning Pvt. Ltd.

Duration: From **27th July 2023** to **27th August 2023**

PEL-SI-2023-1535

CERTIFICATE NO

DIRECTOR, PANTECH E LEARNING
WWW.PANTECHELEARNING.COM

www.zindot.in

Certificate of Appreciation

This is to certify that

DEVIKA LAL G B

student of

JCT COLLEGE OF ENGINEERING AND TECHNOLOGY

has successfully completed 28 days Internship Training in **WEB3 AND BLOCKCHAIN** from **23 JULY, 2023** at Zindot, Kochi. During the internship period we found him/her a sincere, honest, hardworking, dedicated student with a professional attitude and very good professional knowledge.

Director
Zindot

Date : 20 AUG, 2023

Certificate ID: TWM_te44tAa

The Website Makers

CERTIFICATE OF INTERNSHIP

This internship program certificate is proudly awarded to

Dharshan S

Successfully Completed Web Development Internship Program at THE WEBSITE MAKERS, from August to September 2023.

CEO & Co-Founder

Verification At

www.thewebsitemakers.in

Certificate ID: TWM_vmd18iy

The Website Makers

CERTIFICATE OF INTERNSHIP

This internship program certificate is proudly awarded to

Faisal MU

Successfully Completed Web Development Internship Program at THE WEBSITE MAKERS, from 20-06-2023 to 20-07-2023.

CEO & Co-Founder

SEAL

Verification At

www.thewebsitemakers.in

Certificate ID: FSDI23B49

CERTIFICATE

of Completion

This certificate is Presented to

JAYAKRISHNA G

for having successfully completed the **"REACT JS DEVELOPER INTERNSHIP PROGRAM"** at **Skill Safari**. We also acknowledge that he/she has successfully all the assigned tasks and projects with the grade of **'A+'.**

Mr Naveen Chandran
Founder & Director, Skill Safari
Skill Safari

Mr Sai Kishore B K
Founder & Director, Skill Safari
www.skillsafari.in

Certificate ID: FSD123831

CERTIFICATE

of Completion

This certificate is Presented to

GUDA OBULA MAHIDAR REDDY

for having successfully completed the **"REACT JS DEVELOPER INTERNSHIP PROGRAM"** at **Skill Safari**. We also acknowledge that he/she has successfully all the assigned tasks and projects with the grade of **'A+'.**

Mr Naveen Chandran
Founder & Director, Skill Safari
Skill Safari

Mr Sai Kishore B K
Founder & Director, Skill Safari
www.skillsafari.in

Skill VERTEX

CERTIFICATE

OF TRAINING COMPLETION

THIS CERTIFICATE IS PROUDLY PRESENTED TO

GUDI NARESH

This is to certify that the above mentioned candidate has successfully completed His/her Training in **DATA SCIENCE** from 5th August to 5th September 2023.

During this course he/she showed diligence, consistency, determination, active participation and innovation throughout their training period.

Mayank Gathole
(Academic Head)

Student UIN : SV232376

Certificate no. : RA232876

Skill VERTEX

CERTIFICATE

OF INTERNSHIP COMPLETION

THIS CERTIFICATE IS PROUDLY PRESENTED TO

K. GUNENDRA

This is to certify that the above mentioned candidate has successfully completed **WEB DEVELOPMENT** live projects from Artifintel in association with Skillvertex from **27th June 2023 to 27th July 2023.**

During this internship he/she showed diligence,consistency & determination.

Mayank Gathole
(Academic Head)

Artifintel

Certificate ID: RA231608

Skill VERTEX

CERTIFICATE

OF INTERNSHIP COMPLETION

THIS CERTIFICATE IS PROUDLY PRESENTED TO

KAVYA G

This is to certify that the above mentioned candidate has successfully completed **JAVA** live projects in Skillvertex from **27th June 2023 to 27th July 2023.**

During this internship he/she showed diligence,consistency & determination.

Mayank Gathole
(Academic Head)

Artiftintel Private Limited

Certificate ID: RA231598

CERTIFICATE

OF INTERNSHIP COMPLETION

THIS CERTIFICATE IS PROUDLY PRESENTED TO

JERIPITI VENKATA TARUN

This is to certify that the above mentioned candidate has successfully completed **DIGITAL MARKETING** live projects from Artificintel in association with Skillvertex from **27th June 2023 to 27th July 2023.**

During this internship he/she showed diligence,consistency & determination

Mayank Gathale
(Academic Head)

Artificintel

Certificate ID: RA231593

Pantech e Learning
DIGITAL LEARNING SIMPLIFIED

CERTIFICATE

OF INTERNSHIP

Ministry of MSME, Govt. of India

This is to Certify that

KALLU CHINNAVARUN

COMPUTER SCIENCE AND BUSINESS SYSTEM

JCT COLLEGE OF ENGINEERING AND TECHNOLOGY , COIMBATORE, TAMIL NADU

has Successfully Completed the 1 Month Internship on

Full Stack Web Development

at Pantech e learning Pvt. Ltd.

Duration: From **27th July 2023** to **27th August 2023**

PEL-SI-2023-1537

CERTIFICATE NO

DIRECTOR, PANTECH E LEARNING
WWW.PANTECHELEARNING.COM

Skill VERTEX

CERTIFICATE

OF TRAINING COMPLETION

THIS CERTIFICATE IS PROUDLY PRESENTED TO

KASTURI ROHITH

This is to certify that the above mentioned candidate has successfully completed his/her training in **DATA SCIENCE** from **27th May 2023 to 27th June 2023.**

During this course he/she showed diligence, consistency, determination, active participation and innovation throughout their training period.

Mayank Gathole
(Academic Head)

Student UIN : SV231087

Certificate no. : RA231587

Skill VERTEX

CERTIFICATE

OF INTERNSHIP COMPLETION

THIS CERTIFICATE IS PROUDLY PRESENTED TO

K. SAI CHANDU

This is to certify that the above mentioned candidate has successfully completed **WEB DEVELOPMENT** live projects from Artifintel in association with Skillvertex from **27th June 2023 to 27th July 2023.**

During this internship he/she showed diligence,consistency & determination.

Mayank Gathole
(Academic Head)

Artifintel

Certificate ID: RA231607

Skill VERTEX

CERTIFICATE

OF INTERNSHIP COMPLETION

THIS CERTIFICATE IS PROUDLY PRESENTED TO

K. KRANTHI

This is to certify that the above mentioned candidate has successfully completed **WEB DEVELOPMENT** live projects from Artifintel in association with Skillvertex from 27th June 2023 to 27th July 2023.

During this internship he/she showed diligence,consistency & determination.

Mayank Gathole
(Academic Head)

Artifintel

Certificate ID: RA231610

Skill VERTEX

CERTIFICATE

OF INTERNSHIP COMPLETION

THIS CERTIFICATE IS PROUDLY PRESENTED TO

KURUVA GANGADHAR

This is to certify that the above mentioned candidate has successfully completed **DATA SCIENCE** live projects from Artifintel in association with Skillvertex from **27th June 2023 to 27th July 2023.**

During this internship he/she showed diligence,consistency & determination.

Mayank Gathole
(Academic Head)

Artifintel Private Limited

Certificate ID: RA231591

Pantech e Learning
DIGITAL LEARNING SIMPLIFIED

CERTIFICATE

OF INTERNSHIP

Ministry of MSME, Govt. of India

This is to Certify that

MARRIPUDI ANILTEJA

COMPUTER SCIENCE AND BUSINESS SYSTEM

JCT COLLEGE OF ENGINEERING AND TECHNOLOGY, COIMBATORE, TAMILNADU

has Successfully Completed the 1 Month Internship on

Full Stack Web Development

at Pantech e learning Pvt. Ltd.

Duration: From **27th July 2023** to **27th August 2023**

PEL-SI-2023-1536

CERTIFICATE NO

DIRECTOR, PANTECH E LEARNING
WWW.PANTECHELEARNING.COM

Certificate ID: TWM_ksp45ed

The Website Makers

CERTIFICATE OF INTERNSHIP

This internship program certificate is proudly awarded to

Mishal K Jaleel

Successfully Completed Web Development Internship Program at THE WEBSITE MAKERS, from 20/06/2023 to 20/07/2023.

CEO & Co-Founder

SEAL

Verification At

www.thewebsitemakers.in

Certificate ID: FSDI23B34

CERTIFICATE

of Completion

This certificate is Presented to

MOHAMMED SAFAR R

for having successfully completed the **"REACT JS DEVELOPER INTERNSHIP PROGRAM"** at **Skill Safari**. We also acknowledge that he/she has successfully all the assigned tasks and projects with the grade of **'A+'.**

Mr Naveen Chandran
Founder & Director, Skill Safari
Skill Safari

Mr Sai Kishore B K
Founder & Director, Skill Safari
www.skillsafari.in

Certificate ID: FSDI23852

CERTIFICATE

of Completion

This certificate is Presented to

MUHAMMED MIDLAJ R

for having successfully completed the **"REACT JS DEVELOPER INTERNSHIP PROGRAM"** at **Skill Safari**. We also acknowledge that he/she has successfully all the assigned tasks and projects with the grade of **'A+'.**

Mr Naveen Chandran
Founder & Director, Skill Safari
Skill Safari

Mr Sai Kishore B K
Founder & Director, Skill Safari
www.skillsafari.in

Certificate ID: TWM_yhv44ut

The Website Makers

CERTIFICATE OF INTERNSHIP

This internship program certificate is proudly awarded to

MUHAMMED NIHAL KP

Successfully Completed Web Development Internship Program at THE WEBSITE MAKERS, from 07-08-2023 to 07-09-2023.

CEO & Co-Founder

Verification At

www.thewebsitemakers.in

Certificate ID: TWM_vmd18iy

The Website Makers

CERTIFICATE OF INTERNSHIP

This internship program certificate is proudly awarded to

NAGARAJ S

Successfully Completed Web Development Internship Program at THE WEBSITE MAKERS. from 20-06-2023 to 20-07-2023.

CEO & Co-Founder

Verification At

www.thewebsitemakers.in

Skill VERTEX

CERTIFICATE

OF INTERNSHIP COMPLETION

THIS CERTIFICATE IS PROUDLY PRESENTED TO

NAVANEEDHA KRISHNAN R

This is to certify that the above mentioned candidate has successfully completed **DATA SCIENCE** live projects from Artifintel in association with Skillvertex from **27th June 2023 to 27th July 2023.**

During this internship he/she showed diligence,consistency & determination.

Mayank Gathole
(Academic Head)

ArtiFintel

Certificate ID: RA231586

www.zindot.in

Certificate of Appreciation

This is to certify that

NIVED KRISHNA V R

student of

JCT COLLEGE OF ENGINEERING AND TECHNOLOGY

has successfully completed 28 days Internship Training in **WEB3 AND BLOCKCHAIN** from **23 JULY, 2023** at Zindot, Kochi. During the internship period we found him/her a sincere, honest, hardworking, dedicated student with a professional attitude and very good professional knowledge.

Director
Zindot

Date : 20 AUG, 2023

Certificate ID: TWM_npe09vk

The Website Makers

CERTIFICATE OF INTERNSHIP

This internship program certificate is proudly awarded to

Prabitha.NP

Successfully Completed Web Development Internship Program at THE WEBSITE MAKERS, from 20-06-2023 to 20-07-2023.

CEO & Co-Founder

Verification At

www.thewebsitemakers.in

Teachnook
STARTING POINT FOR YOUR CAREER PATH

WEBOIN

CERTIFICATE OF INTERNSHIP COMPLETION

PRESENTED TO

V . Prem Kumar

has successfully completed Mentorship Program on Web Development from Webain in associated with Teachnook. During this internship, the student has found to be keen and enthusiastic Candidate.

Certificate ID : TNWDINT23-1471

Duration : 01/08/2023 30/09/2023

Academic Head

SR.HR Manager

Web Development

14-Oct-2023

Verified Certificate

A Verified Certificate from Teachnook can provide a proof for a student or other institution, an employer or other institution, that you have successfully completed an online course.

CERTIFICATE OF COMPLETION

OASIS INFOBYTE

07/25/2023

This certificate is proudly presented to

P Divya Sree

for successful completion of **1 month internship** in **Web Development and Designing** with wonderful remarks at **OASIS INFOBYTE**

contact@oasisinfobyte.in | OIB/OCT644 | www.oasisinfobyte.com

SKILL VERTEX

CERTIFICATE

OF INTERNSHIP COMPLETION

THIS CERTIFICATE IS PROUDLY PRESENTED TO

RAMIREDDYHARIKRISHNA REDDY

This is to certify that the above mentioned candidate has successfully completed **DATA SCIENCE** live projects from Artifintel in association with Skillvertex from 27th June 2023 to 27th July 2023.

During this internship he/she showed diligence,consistency & determination.

Mayank Gathole
(Academic Head)

Artifintel

Certificate ID: RA231585

www.zindot.in

Certificate of Appreciation

This is to certify that

Rangarajan M

student of

JCT COLLEGE OF ENGINEERING AND TECHNOLOGY

has successfully completed 28 days Internship Training in **WEB3 AND BLOCKCHAIN** from **23 JULY, 2023** at Zindot, Kochi. During the internship period we found him/her a sincere, honest, hardworking, dedicated student with a professional attitude and very good professional knowledge.

Director
Zindot

Date : 20 AUG, 2023

Certificate ID: TWM_vmd18iy

The Website

CERTIFICATE OF INTERNSHIP

This internship program certificate is proudly awarded to

RANJITH

Successfully Completed Web Development Internship Program at THE WEBSITE MAKERS, from 20-06-2023 to 20-07-2023.

CEO & Co-Founder

SEAL

Verification At

www.thewebsitemakers.in

@internPE

INTERNSHIP COMPLETION CERTIFICATE

CID:IPIC#5569

To whomever it may concern

This is to certify that **RAVIVARMAN M** worked as an Intern in our company from **09-0ct-2023 to 05-Nov-2023**

Please find the internship details below:

Company Name: InternPe
Location: Remote
Domain: AI/ML Programming
Designation: Intern

During their working period, we found him/her to be a sincere and dedicated intern with a professional attitude and very good knowledge of the job.

We thank him/her for their efforts and contribution and wish him/her the best in future endeavors.

Yours Sincerely

(Co-Founder)
InternPe

Certificate ID: FSDI23B26

CERTIFICATE

of Completion

This certificate is Presented to

RITVIK RAMACHANDRAN

for having successfully completed the **"REACT JS DEVELOPER INTERNSHIP PROGRAM"** at **Skill Safari**. We also acknowledge that he/she has successfully all the assigned tasks and projects with the grade of **'A+'.**

Mr Naveen Chandran
Founder & Director, Skill Safari
Skill Safari

Mr Sai Kishore B K
Founder & Director, Skill Safari
www.skillsafari.in

www.zindot.in

Certificate of Appreciation

This is to certify that

SANDRA SURESH

student of

JCT COLLEGE OF ENGINEERING AND TECHNOLOGY

has successfully completed 28 days Internship Training in **WEB3 AND BLOCKCHAIN** from **23 JULY, 2023** at Zindot, Kochi. During the internship period we found him/her a sincere, honest, hardworking, dedicated student with a professional attitude and very good professional knowledge.

Date : 20 AUG, 2023

Director
Zindot

Teachnook
STARTING POINT FOR YOUR CAREER PATH

WISSENAIRE

Certificate of Course Completion

Shaik Asif

has successfully completed **Web Development**
with Teachnook from **01/08/2023** to **30/09/2023**

During this course, the student has found to be keen and enthusiastic Candidate.

Academic Head

Sr. HR Manager

Verified Certificate

Certificate ID : TNINTC23-6938
Date 12/10/2023

A Verified Certificate from Teachnook can provide a proof for a student or other institution, an employer or other institution, that you have successfully completed an online course

Skill VERTEX

CERTIFICATE

OF TRAINING COMPLETION

THIS CERTIFICATE IS PROUDLY PRESENTED TO

SHAIK BABJI

This is to certify that the above mentioned candidate has successfully completed his/her training in **WEB DEVELOPMENT** from **27th May 2023 to 27th June 2023.**

During this course he/she showed diligence, consistency, determination, active participation and innovation throughout their training period.

Mayank Gathole
(Academic Head)

Student UIN : SV231113

Certificate no. : RA231613

Skill VERTEX

CERTIFICATE

OF INTERNSHIP COMPLETION

THIS CERTIFICATE IS PROUDLY PRESENTED TO

RIZWANA SHAIK

This is to certify that the above mentioned candidate has successfully completed **DATA SCIENCE** live projects from Artifintel in association with Skillvertex from **27th June 2023 to 27th July 2023.**

During this internship he/she showed diligence,consistency & determination.

Mayank Gathole
(Academic Head)

Artifintel

Certificate ID: RA231589

Certificate ID: FSDI23B23

CERTIFICATE

of Completion

This certificate is Presented to

SHIBIL RAHMAN M B

for having successfully completed the **"REACT JS DEVELOPER INTERNSHIP PROGRAM"** at **Skill Safari**. We also acknowledge that he/she has successfully all the assigned tasks and projects with the grade of **'A+'.**

Mr Naveen Chandran
Founder & Director, Skill Safari
Skill Safari

Mr Sai Kishore B K
Founder & Director, Skill Safari
www.skillsafari.in

Certificate ID: TWM_te44tAa

The Website Makers

CERTIFICATE OF INTERNSHIP

This internship program certificate is proudly awarded to

Sidharth N

Successfully Completed Web Development Internship Program at THE WEBSITE MAKERS, from August to September 2023.

CEO & Co-Founder

Verification At

www.thewebsitemakers.in

Certificate ID: TWM_te44tAa

The Website Makers

CERTIFICATE OF INTERNSHIP

This internship program certificate is proudly awarded to

Sreeraj Varma R

Successfully Completed Web Development Internship Program at THE WEBSITE MAKERS, from August to September 2023.

CEO & Co-Founder

Verification At

www.thewebsitemakers.in

Certificate ID: TWM_ncgl6rv

The Website Makers

CERTIFICATE OF INTERNSHIP

This internship program certificate is proudly awarded to

Srudhina MS

Successfully Completed Web Development Internship Program at THE WEBSITE MAKERS, from 20-06-2023 to 20-07-2023.

CEO & Co-Founder

SEAL

Verification At

www.thewebsitemakers.in

Teachnook
STARTING POINT FOR YOUR CAREER PATH

WISSENAIRE

Certificate of Course Completion

Thangam Charaneswar

has successfully completed Web Development

with Teachnook from 01/08/2023 to 30/09/2023

During this course, the student has found to be keen and enthusiastic Candidate.

Academic Head

Sr. HR Manager

Verified Certificate

A Verified Certificate from Teachnook can provide a proof for a student or other institution, an employer or other institution, that you have successfully completed an online course

Certificate ID: TNINTC23-6925

Date 12/10/2023

www.zindot.in

Certificate of Appreciation

This is to certify that

VAISHNAVI A

student of

JCT COLLEGE OF ENGINEERING AND TECHNOLOGY

has successfully completed 28 days Internship Training in **WEB3 AND BLOCKCHAIN** from **23 JULY, 2023** at Zindot, Kochi. During the internship period we found him/her a sincere, honest, hardworking, dedicated student with a professional attitude and very good professional knowledge.

ZINDOT INNOVATIONS ERNAKULAM 686 691 KOTHAMANGALAM

Director
Zindot

Date : 20 AUG, 2023

Certificate ID: TWM_te44tAa

The Website Makers

CERTIFICATE OF INTERNSHIP

This internship program certificate is proudly awarded to

VASANTH L

Successfully Completed Web Development Internship Program at THE WEBSITE MAKERS, from August to September 2023.

CEO & Co-Founder

Verification At

www.thewebsitemakers.in

Certificate ID: TWM_te44tAa

The Website Makers

CERTIFICATE OF INTERNSHIP

This internship program certificate is proudly awarded to

VASANTHAN K

Successfully Completed Web Development Internship Program at THE WEBSITE MAKERS, from August to September 2023.

CEO & Co-Founder

Verification At

www.thewebsitemakers.in

ELECTRONICS AND COMMUNICATION ENGINEERING

1.3.2 Number of students undertaking field work/Intership

Program name	Program code	List of the students undertaking project work/field work/ Internship	Link to the relevant document
B.E ECE	105	ARISH M	
		BHARANI DHARSAN S	
		BEFARIN T	
		CHARUGUNDLA CHARAN	
		GIRIVASAN S	
		GUNAPRIYA T	
		HARI RAMAKRISHNAN M	
		IJAS SHAHADH Y	
		MUKESH S	
		NANDYALA KUSMANTH REDDY	
		PANDI VIGNESH M	
		PEDDAMALLU GOWTHAM REDDY	
		PREMA S	
		PULLUGARI SURENDRA	
		RANGAPURAM BALATEJA	
		SASITHARAN G	
		SATHISH M	
		SIJITH R	
		SIVAPRAVEEN R	
		SIVASURAYA S	
		SRI KANTH D	
		THAMMISETTI NANDEESWAR	
		VENNAPUSA ABHISHEK REDDY	
		VETRI SELVI V	
		DINESH K	
		SUBRAMANI P	
		KATHIRVEL R	
		AATHAVAN P	
		ADARSH K S	
		AILUGARI BHANU PRAKASH	
		ARAVIND GANESH	
		AVULA MALLA REDDY	
		DHINESH M	
		DHIVAKAR S	
		DUDEKULA BALA DASTAGIRI	
		DUDEKULA SIDDIQ	
		GADDAM MANISHA	
		GOLLA SUMANTH	
		KARTHIKEYAN A T	
		LOKESH M	
		MOHANSETHUPATHI A	
		MONABOTI GANGA MAHESH	
		NANDIBATHINI VENKATESH	
		NARE JAGADEESH	
		NUNE KOTESWARA RAO	
		PORULCHELVAN S	
		REDDYGARI CHETHANA	
		SANJAY K	
		SANNITHI SUKESH S	
		SHAIK NAFIYA TABASUM	

PRINCIPAL
JCT College of Engineering & Technology
PICHANUR, COIMBATORE - 641 105.

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Internship Students List-ECE-(2023-24)

Sl. No.	Title of the collaborative activity	Name of the collaborating agency with contact details	Name of the participant	Year of collaboration	Duration
1	Internship	ACCEL IT ACADEMY	ARISH M	2023-24	12.6.2024 to 18.6.2024
2	Internship	ACCEL IT ACADEMY	BHARANI DHARSAN S	2023-24	12.6.2024 to 18.6.2024
3	Internship	ASCENTZ TECHNOLOGIES	BEFARIN T	2023-24	19.1.2024 to 25.1.2024
4	Internship	ASCENTZ TECHNOLOGIES	CHARUGUNDLA CHARAN	2023-24	19.1.2024 to 25.1.2024
5	Internship	ITI LIMITED	GIRIVASAN S	2023-24	07.8.2023 to 13.8.2023
6	Internship	ITI LIMITED	GUNAPRIYA T	2023-24	07.8.2023 to 13.8.2023
7	Internship	APEX I SYS	HARI RAMAKRISHNAN M	2023-24	17.6.2024 to 22.6.2024
8	Internship	APEX I SYS	IJAS SHAHADH Y	2023-24	17.6.2024 to 22.6.2024
9	Internship	ASCENTZ TECHNOLOGIES	MUKESH S	2023-24	19.1.2024 to 25.1.2024
10	Internship	ITI LIMITED	NANDYALA KUSMANTH REDDY	2023-24	07.8.2023 to 13.8.2023
11	Internship	ITI LIMITED	PANDI VIGNESH M	2023-24	07.8.2023 to 13.8.2023
12	Internship	APEX I SYS	PEDDAMALLU GOWTHAM REDDY	2023-24	17.6.2024 to 22.6.2024
13	Internship	ASCENTZ TECHNOLOGIES	PREMA S	2023-24	19.1.2024 to 25.1.2024
14	Internship	ASCENTZ TECHNOLOGIES	PULLUGARI SURENDRA	2023-24	19.1.2024 to 25.1.2024
15	Internship	ACCEL IT ACADEMY	RANGAPURAM BALATEJA	2023-24	12.6.2024 to 18.6.2024
16	Internship	ACCEL IT ACADEMY	SASITHARAN G	2023-24	12.6.2024 to 18.6.2024
17	Internship	APEX I SYS	SATHISH M	2023-24	17.6.2024 to 22.6.2024
18	Internship	ASCENTZ TECHNOLOGIES	SIIITH R	2023-24	19.1.2024 to 25.1.2024
19	Internship	ITI LIMITED	SIVAPRAVEEN R	2023-24	07.8.2023 to 13.8.2023
20	Internship	ITI LIMITED	SIVASURAYA S	2023-24	07.8.2023 to 13.8.2023
21	Internship	APEX I SYS	SRI KANTH D	2023-24	17.6.2024 to 22.6.2024
22	Internship	ASCENTZ TECHNOLOGIES	THAMMISETTI NANDEESWAR	2023-24	19.1.2024 to 25.1.2024
23	Internship	APEX I SYS	VENNAPUSA ABHISHEK REDDY	2023-24	17.6.2024 to 22.6.2024
24	Internship	ASCENTZ TECHNOLOGIES	VETRI SELVI V	2023-24	19.1.2024 to 25.1.2024
25	Internship	APEX I SYS	DINESH K	2023-24	17.6.2024 to 22.6.2024
26	Internship	APEX I SYS	SUBRAMANI P	2023-24	17.6.2024 to 22.6.2024
27	Internship	ASCENTZ TECHNOLOGIES	KATHIRVEL R	2023-24	19.1.2024 to 25.1.2024
28	Internship	ASCENTZ TECHNOLOGIES	AATHAVAN P	2023-24	19.1.2024 to 25.1.2024
29	Internship	APEX I SYS	ADARSH K S	2023-24	17.6.2024 to 22.6.2024
30	Internship	ITI LIMITED	AILUGARI BHANU PRAKASH	2023-24	07.8.2023 to 13.8.2023
31	Internship	ITI LIMITED	ARAVIND GANESH	2023-24	07.8.2023 to 13.8.2023
32	Internship	APEX I SYS	AVULA MALLA REDDY	2023-24	17.6.2024 to 22.6.2024

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33	Internship	ASCENTZ TECHNOLOGIES	DHINESH M	2023-24	19.1.2024 to 25.1.2024
34	Internship	ACCEL IT ACADEMY	DHIWAKAR S	2023-24	12.6.2024 to 18.6.2024
35	Internship	ACCEL IT ACADEMY	DUDEKULA BALA DASTAGIRI	2023-24	12.6.2024 to 18.6.2024
36	Internship	APEX I SYS	DUDEKULA SIDDIQ	2023-24	17.6.2024 to 22.6.2024
37	Internship	ITI LIMITED	GADDAM MANISHA	2023-24	07.8.2023 to 13.8.2023
38	Internship	ITI LIMITED	GOLLA SUMANTH	2023-24	07.8.2023 to 13.8.2023
39	Internship	ITI LIMITED	KARTHIKEYAN A T	2023-24	07.8.2023 to 13.8.2023
40	Internship	APEX I SYS	LOKESH M	2023-24	17.6.2024 to 22.6.2024
41	Internship	ASCENTZ TECHNOLOGIES	MOHANSETHUPATHI A	2023-24	19.1.2024 to 25.1.2024
42	Internship	ASCENTZ TECHNOLOGIES	MONABOTI GANGA MAHESH	2023-24	19.1.2024 to 25.1.2024
43	Internship	APEX I SYS	NANDIBATHINI VENKATESH	2023-24	17.6.2024 to 22.6.2024
44	Internship	APEX I SYS	NARE JAGADEESH	2023-24	17.6.2024 to 22.6.2024
45	Internship	ITI LIMITED	NUNE KOTESWARA RAO	2023-24	07.8.2023 to 13.8.2023
46	Internship	ITI LIMITED	PORULCHELVAN S	2023-24	07.8.2023 to 13.8.2023
47	Internship	ITI LIMITED	REDOYGARI CHETHANA	2023-24	07.8.2023 to 13.8.2023
48	Internship	APEX I SYS	SANJAY K	2023-24	17.6.2024 to 22.6.2024
49	Internship	ACCEL IT ACADEMY	SANNITHI SUKESH S	2023-24	12.6.2024 to 18.6.2024
50	Internship	ACCEL IT ACADEMY	SHAIK NAFIYA TABASUM	2023-24	12.6.2024 to 18.6.2024

HOD-ECE

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Tel: 0491- 6000177, 2504570 / 71.

DATE :18/06/2024

CERTIFICATE

This is to certify that **Mr. Arish M** has undergone training for below mentioned topics as a part of **Embedded System Awareness Workshop** by Accel IT Academy Palakkad. (Training division of Accel Frontline Global IT Service Limited. He has successfully completed the said training and has gain very good knowledge.

1. Simulation in Proteus design suite
2. Embedded C Programming
3. PIC micro controller programming with Hardware Architecture

Total duration for the said training was 12 hours including practical sessions starting from 12/06/2024 to 18/06/2024.

We wish Mr. ARISH M for very bright career ahead.

Ratheesh Kelath
Centre Manager
Accel IT Academy
Palakkad

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DATE :18/06/2024

CERTIFICATE

This is to certify that **Mr. Barani Dharsan S** has undergone training for below mentioned topics as a part of **Embedded System Awareness Workshop** by Accel IT Academy Palakkad. (Training division of Accel Frontline Global IT Service Limited. He has successfully completed the said training and has gain very good knowledge.

1. Simulation in Proteus design suite
2. Embedded C Programming
3. PIC micro controller programming with Hardware Architecture

Total duration for the said training was 12 hours including practical sessions starting from 12/06/2024 to 18/06/2024.

We wish Mr. BARANI DHARSAN S for very bright career ahead.

Ratheesh Kesh
Centre Manager
Accel IT Academy
Palakkad

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E-mail : ascentztech@gmail.com

25th January 2024
Coimbatore

CERTIFICATE

This is to certify that Mr.Befarin.T ,Student of B.E (Electronics and Communication Engineering), Second Year, JCT COLLEGE OF ENGINEERING & TECHNOLOGY, COIMBATORE has undergone an Internship Training from 19/01/2024 to 25/01/2024 at ASCENTZ TECHNOLOGIES, Coimbatore and has been trained in Embedded System.

We wish him success in all his future endeavours.

For Ascentz Technologies

HR Manager

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E-mail : ascentztech@gmail.com

25th January 2024
Coimbatore

CERTIFICATE

This is to certify that Mr.Charugundla Charan ,Student of B.E (Electronics and Communication Engineering), Second Year, JCT COLLEGE OF ENGINEERING & TECHNOLOGY, COIMBATORE has undergone an Internship Training from 19/01/2024 to 25/01/2024 at ASCENTZ TECHNOLOGIES, Coimbatore and has been trained in Embedded System.

We wish him success in all his future endeavours.

For Ascentz Technologies

HR Manager

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फेक्स : (०४९१) २५६६००९
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Web Site : www.itiltd-india.com

Date:13.08.2023

CERTIFICATE

This is to certify that Mr. GIRIVARSAN.S, B.E (Electronics & Communication Engg.) II year student from JCT COLLEGE OF ENGINEERING & TECHNOLOGY, COIMBATORE; has undergone Internship Training in our Organisation from 07.08.2023 to 13.08.2023 in the following Departments:

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2. Customer Service Centre, Product Support
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4. Customer Engineering
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9. Computer Centre
10. Plant Electrical, Civil & Mechanical
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13. Industrial Engineering
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15. HR

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ASST. OFFICER-HR
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फेक्स : (०४९१) २५६६००९
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Web Site : www.itiltd-india.com

Date:13.08.2023

CERTIFICATE

This is to certify that Ms. GUNAPRIYA.T, B.E (Electronics & Communication Engg.) II year student from JCT COLLEGE OF ENGINEERING & TECHNOLOGY, COIMBATORE; has undergone Internship Training in our Organisation from 07.08.2023 to 13.08.2023 in the following Departments:

1. Manufacturing, PCB, Testing
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7. Computer Centre
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12. Commercial., Sales & Billing
13. Industrial Engineering
14. Shipping
15. HR

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APEX I SYS

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22/06/2024

INTERNSHIP CERTIFICATE

This is to certify that **Mr. HARI RAMAKRISHNAN.M** has successfully completed Internship on **"Embedded System"** in our organization from 17/06/2024 to 22/06/2024. We found Mr.Hari Ramakrishnan.M is effective in discharging responsibilites assigned to him. During his tenure with us for the above period , we found him efficient, his character and conduct were good.

We wish him all success and growth in his life

Yours Truly,
For Apex I Sys

Balamurugan T S
Director Operations

APEX I SYS Coimbatore-12

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22/06/2024

INTERNSHIP CERTIFICATE

This is to certify that **Mr.IJAS SHAHADH.Y** has successfully completed Internship on **"Embedded System"** in our organization from 17/06/2024 to 22/06/2024. We found Mr.Ijas Shahadh.Y is effective in discharging responsibilites assigned to him. During his tenure with us for the above period , we found him efficient, his character and conduct were good.

We wish him all success and growth in his life

Yours Truly,
For Apex I Sys

Balamurugan T S
Director Operations

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25th January 2024
Coimbatore

CERTIFICATE

This is to certify that Mr.Mukesh.S ,Student of B.E (Electronics and Communication Engineering), Second Year, JCT COLLEGE OF ENGINEERING & TECHNOLOGY, COIMBATORE has undergone an Internship Training from 19/01/2024 to 25/01/2024 at ASCENTZ TECHNOLOGIES, Coimbatore and has been trained in Embedded System.

We wish him success in all his future endeavours.

For Ascentz Technologies

HR Manager

आईटीआई लिमिटेड
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Web Site : www.itiltd-india.com

Date:13.08.2023

CERTIFICATE

This is to certify that Mr. NANDYALA KUSMANTH REDDY, B.E (Electronics & Communication Engg.) II year student from JCT COLLEGE OF ENGINEERING & TECHNOLOGY, COIMBATORE; has undergone Internship Training in our Organisation from 07.08.2023 to 13.08.2023 in the following Departments:

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15. HR

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Web Site : www.itiltd-india.com

Date:13.08.2023

CERTIFICATE

This is to certify that Mr.PANDI VIGNESH.M, B.E (Electronics & Communication Engg.) II year student from JCT COLLEGE OF ENGINEERING & TECHNOLOGY, COIMBATORE; has undergone Internship Training in our Organisation from 07.08.2023 to 13.08.2023 in the following Departments:

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22/06/2024

INTERNSHIP CERTIFICATE

This is to certify that **Mr.PEDDAMALLU GOWTHAM REDDY** has successfully completed Internship on **"Embedded System"** in our organization from 17/06/2024 to 22/06/2024. We found Mr.Peddamallu Gowtham Reddy is effective in discharging responsibilites assigned to him. During his tenure with us for the above period , we found him efficient, his character and conduct were good.

We wish him all success and growth in his life

Yours Truly,
For Apex I Sys

Balamurugan T S
Director Operations

APEX I SYS Coimbatore-12

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E-mail : ascentztech@gmail.com

25th January 2024
Coimbatore

CERTIFICATE

This is to certify that Mr.Prema.S ,Student of B.E (Electronics and Communication Engineering), Second Year, JCT COLLEGE OF ENGINEERING & TECHNOLOGY, COIMBATORE has undergone an Internship Training from 19/01/2024 to 25/01/2024 at ASCENTZ TECHNOLOGIES, Coimbatore and has been trained in Embedded System.

We wish him success in all his future endeavours.

For Ascentz Technologies

HR Manager

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E-mail : ascentztech@gmail.com

25th January 2024
Coimbatore

CERTIFICATE

This is to certify that Mr.Pullugari Surendra ,Student of B.E (Electronics and Communication Engineering), Second Year, JCT COLLEGE OF ENGINEERING & TECHNOLOGY, COIMBATORE has undergone an Internship Training from 19/01/2024 to 25/01/2024 at ASCENTZ TECHNOLOGIES, Coimbatore and has been trained in Embedded System.

We wish him success in all his future endeavours.

For Ascentz Technologies

HR Manager

ACCEL IT ACADEMY
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Tel: 0491- 6000177, 2504570 / 71.

DATE :18/06/2024

CERTIFICATE

This is to certify that **Mr. Rangapuram Bala Teja** has undergone training for below mentioned topics as a part of **Embedded System Awareness Workshop** by Accel IT Academy Palakkad. (Training division of Accel Frontline Global IT Service Limited. He has successfully completed the said training and has gain very good knowledge.

1. Simulation in Proteus design suite
2. Embedded C Programming
3. PIC micro controller programming with Hardware Architecture

Total duration for the said training was 12 hours including practical sessions starting from 12/06/2024 to 18/06/2024.

We wish Mr. RANGAPURAM BALA TEJA for very bright career ahead.

Ratheesh Kesh
Centre Manager
Accel IT Academy
Palakkad

ACCEL IT ACADEMY
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Tel: 0491- 6000177, 2504570 / 71.

DATE :18/06/2024

CERTIFICATE

This is to certify that **Mr.Sasitharan G** has undergone training for below mentioned topics as a part of **Embedded System Awareness Workshop** by Accel IT Academy Palakkad. (Training division of Accel Frontline Global IT Service Limited. He has successfully completed the said training and has gain very good knowledge.

1. Simulation in Proteus design suite
2. Embedded C Programming
3. PIC micro controller programming with Hardware Architecture

Total duration for the said training was 12 hours including practical sessions starting from 12/06/2024 to 18/06/2024.

We wish Mr.SASITHARAN G for very bright career ahead.

Ratheesh Kelath
Centre Manager
Accel IT Academy
Palakkad

APEX I SYS

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3rd Cross Cut Street,
Gandhipuram, Coimbatore -12.

22/06/2024

INTERNSHIP CERTIFICATE

This is to certify that **Mr.SATHISH.M** has successfully completed Internship on **"Embedded System"** in our organization from 17/06/2024 to 22/06/2024. We found Mr.Sathish.M is effective in discharging responsibilites assigned to him. During his tenure with us for the above period , we found him efficient, his character and conduct were good.

We wish him all success and growth in his life

Yours Truly,
For Apex I Sys

Balamurugan T S
Director Operations

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25th January 2024
Coimbatore

CERTIFICATE

This is to certify that Mr.Sijith.R ,Student of B.E (Electronics and Communication Engineering), Second Year, JCT COLLEGE OF ENGINEERING & TECHNOLOGY, COIMBATORE has undergone an Internship Training from 19/01/2024 to 25/01/2024 at ASCENTZ TECHNOLOGIES, Coimbatore and has been trained in Embedded System.

We wish him success in all his future endeavours.

For Ascentz Technologies

HR Manager

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Web Site : www.itiltd-india.com

Date:13.08.2023

CERTIFICATE

This is to certify that Mr.SIVAPRAVEEN.R, B.E (Electronics & Communication Engg.) II year student from JCT COLLEGE OF ENGINEERING & TECHNOLOGY, COIMBATORE; has undergone Internship Training in our Organisation from 07.08.2023 to 13.08.2023 in the following Departments:

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11. Marketing & Customer Engineering
12. Commercial., Sales & Billing
13. Industrial Engineering
14. Shipping
15. HR

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Date:13.08.2023

CERTIFICATE

This is to certify that Mr.SIVASURYA,B.E (Electronics & Communication Engg.) II year student from JCT COLLEGE OF ENGINEERING & TECHNOLOGY, COIMBATORE; has undergone Internship Training in our Organisation from 07.08.2023 to 13.08.2023 in the following Departments:

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22/06/2024

INTERNSHIP CERTIFICATE

This is to certify that **Mr.SRIKANTH.D** has successfully completed Internship on **"Embedded System"** in our organization from 17/06/2024 to 22/06/2024. We found Mr.Srikanth.D is effective in discharging responsibilites assigned to him. During his tenure with us for the above period , we found him efficient, his character and conduct were good.

We wish him all success and growth in his life

Yours Truly,
For Apex I Sys

Balamurugan T S
Director Operations

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E-mail : ascentztech@gmail.com

25th January 2024
Coimbatore

CERTIFICATE

This is to certify that Mr.Thammisetti Nandeeswar ,Student of B.E (Electronics and Communication Engineering), Second Year, JCT COLLEGE OF ENGINEERING & TECHNOLOGY, COIMBATORE has undergone an Internship Training from 19/01/2024 to 25/01/2024 at ASCENTZ TECHNOLOGIES, Coimbatore and has been trained in Embedded System.

We wish him success in all his future endeavours.

For Ascentz Technologies

HR Manager

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INTERNSHIP CERTIFICATE

This is to certify that **Mr.VENNAPUSA ABHISHEK REDDY** has successfully completed Internship on **"Embedded System"** in our organization from 17/06/2024 to 22/06/2024. We found Mr.Vennapusa Abhishek Reddy is effective in discharging responsibilites assigned to him. During his tenure with us for the above period , we found him efficient, his character and conduct were good.

We wish him all success and growth in his life

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Director Operations

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25th January 2024
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CERTIFICATE

This is to certify that Ms.VetriSelvi.V ,Student of B.E (Electronics and Communication Engineering), Second Year, JCT COLLEGE OF ENGINEERING & TECHNOLOGY, COIMBATORE has undergone an Internship Training from 19/01/2024 to 25/01/2024 at ASCENTZ TECHNOLOGIES, Coimbatore and has been trained in Embedded System.

We wish him success in all his future endeavours.

For Ascentz Technologies

HR Manager

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22/06/2024

INTERNSHIP CERTIFICATE

This is to certify that **Mr.DINESH.K** has successfully completed Internship on **"Embedded System"** in our organization from 17/06/2024 to 22/06/2024. We found Mr.Dinesh.K is effective in discharging responsibilites assigned to him. During his tenure with us for the above period , we found him efficient, his character and conduct were good.

We wish him all success and growth in his life

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Balamurugan T S
Director Operations

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INTERNSHIP CERTIFICATE

This is to certify that **Mr.Subramani.P** has successfully completed Internship on **"Embedded System"** in our organization from 17/06/2024 to 22/06/2024. We found Mr.Subramani.P is effective in discharging responsibilites assigned to him. During his tenure with us for the above period , we found him efficient, his character and conduct were good.

We wish him all success and growth in his life

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25th January 2024
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CERTIFICATE

This is to certify that Mr.Kathirvel.R ,Student of B.E (Electronics and Communication Engineering), Second Year, JCT COLLEGE OF ENGINEERING & TECHNOLOGY, COIMBATORE has undergone an Internship Training from 19/01/2024 to 25/01/2024 at ASCENTZ TECHNOLOGIES, Coimbatore and has been trained in Embedded System.

We wish him success in all his future endeavours.

For Ascentz Technologies

HR Manager

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CERTIFICATE

This is to certify that Mr.Aathavan.P ,Student of B.E (Electronics and Communication Engineering), Third Year, JCT COLLEGE OF ENGINEERING & TECHNOLOGY, COIMBATORE has undergone an Internship Training from 19/01/2024 to 25/01/2024 at ASCENTZ TECHNOLOGIES, Coimbatore and has been trained in Embedded System.

We wish him success in all his future endeavours.

For Ascentz Technologies

HR Manager

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22/06/2024

INTERNSHIP CERTIFICATE

This is to certify that **Mr.ADARSH.K.S** has successfully completed Internship on **"Embedded System"** in our organization from 17/06/2024 to 22/06/2024. We found Mr.Adarsh.K.S is effective in discharging responsibilites assigned to him. During his tenure with us for the above period , we found him efficient, his character and conduct were good.

We wish him all success and growth in his life

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CERTIFICATE

This is to certify that Mr.AILUGARI BHANU PRAKASH, B.E (Electronics & Communication Engg.) III year student from JCT COLLEGE OF ENGINEERING & TECHNOLOGY, COIMBATORE; has undergone Internship Training in our Organisation from 07.08.2023 to 13.08.2023 in the following Departments:

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Date:13.08.2023

CERTIFICATE

This is to certify that Mr.ARAVIND GANESHA, B.E (Electronics & Communication Engg.) III year student from JCT COLLEGE OF ENGINEERING & TECHNOLOGY, COIMBATORE; has undergone Internship Training in our Organisation from 07.08.2023 to 13.08.2023 in the following Departments:

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22/06/2024

INTERNSHIP CERTIFICATE

This is to certify that **Mr.AVULA MALLA REDDY** has successfully completed Internship on **"Embedded System"** in our organization from 17/06/2024 to 22/06/2024. We found Mr.Avula Malla Reddy is effective in discharging responsibilites assigned to him. During his tenure with us for the above period , we found him efficient, his character and conduct were good.

We wish him all success and growth in his life

Yours Truly,
For Apex I Sys

Balamurugan T S
Director Operations

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25th January 2024
Coimbatore

CERTIFICATE

This is to certify that Mr.Dhinesh.M ,Student of B.E (Electronics and Communication Engineering), Third Year, JCT COLLEGE OF ENGINEERING & TECHNOLOGY, COIMBATORE has undergone an Internship Training from 19/01/2024 to 25/01/2024 at ASCENTZ TECHNOLOGIES, Coimbatore and has been trained in Embedded System.

We wish him success in all his future endeavours.

For Ascentz Technologies

HR Manager

ACCEL IT ACADEMY
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Branch Office: No. 18/47 (22), 3rd Floor, Surya Corner, English Church Road, Opp. Big Bazaar Super Market, Palakkad - 678 001.
Tel: 0491- 6000177, 2504570 / 71.

DATE :18/06/2024

CERTIFICATE

This is to certify that **Mr.Dhiwakar S** has undergone training for below mentioned topics as a part of **Embedded System Awareness Workshop** by Accel IT Academy Palakkad. (Training division of Accel Frontline Global IT Service Limited. He has successfully completed the said training and has gain very good knowledge.

1. Simulation in Proteus design suite
2. Embedded C Programming
3. PIC micro controller programming with Hardware Architecture

Total duration for the said training was 12 hours including practical sessions starting from 12/06/2024 to 18/06/2024.

We wish Mr.DHIWAKAR S for very bright career ahead.

Ratheesh Kesh
Centre Manager
Accel IT Academy
Palakkad

ACCEL IT ACADEMY
(A Division of ACCEL IT RESOURCES LIMITED)

Branch Office: No. 18/47 (22), 3rd Floor, Surya Corner, English Church Road, Opp. Big Bazaar Super Market, Palakkad - 678 001.
Tel: 0491- 6000177, 2504570 / 71.

DATE :18/06/2024

CERTIFICATE

This is to certify that **Mr.Dudekula Bala Dastagiri** has undergone training for below mentioned topics as a part of **Embedded System Awareness Workshop** by Accel IT Academy Palakkad. (Training division of Accel Frontline Global IT Service Limited. He has successfully completed the said training and has gain very good knowledge.

1. Simulation in Proteus design suite
2. Embedded C Programming
3. PIC micro controller programming with Hardware Architecture

Total duration for the said training was 12 hours including practical sessions starting from 12/06/2024 to 18/06/2024.

We wish Mr.DUDEKULA BALA DASTAGIRI for very bright career ahead.

Ratheesh Kelath
Centre Manager
Accel IT Academy
Palakkad

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22/06/2024

INTERNSHIP CERTIFICATE

This is to certify that **Mr.DUDEKULA SIDDIQ** has successfully completed Internship on **"Embedded System"** in our organization from 17/06/2024 to 22/06/2024. We found Mr.Dudekula Siddiq is effective in discharging responsibilites assigned to him. During his tenure with us for the above period , we found him efficient, his character and conduct were good.

We wish him all success and growth in his life

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For Apex I Sys

Balamurugan T S
Director Operations

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Date:13.08.2023

CERTIFICATE

This is to certify that Ms.GADDAM MANISHA,B.E (Electronics & Communication Engg.) III year student from JCT COLLEGE OF ENGINEERING & TECHNOLOGY, COIMBATORE; has undergone Internship Training in our Organisation from 07.08.2023 to 13.08.2023 in the following Departments:

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CERTIFICATE

This is to certify that Mr.GOLLA SUMANTH, B.E (Electronics & Communication Engg.) III year student from JCT COLLEGE OF ENGINEERING & TECHNOLOGY, COIMBATORE; has undergone Internship Training in our Organisation from 07.08.2023 to 13.08.2023 in the following Departments:

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Date:13.08.2023

CERTIFICATE

This is to certify that Mr.KARTHIKEYAN.A.T B.E (Electronics & Communication Engg.) III year student from JCT COLLEGE OF ENGINEERING & TECHNOLOGY, COIMBATORE; has undergone Internship Training in our Organisation from 07.08.2023 to 13.08.2023 in the following Departments:

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22/06/2024

INTERNSHIP CERTIFICATE

This is to certify that **Mr.LOKESH.M** has successfully completed Internship on **"Embedded System"** in our organization from 17/06/2024 to 22/06/2024. We found Mr.Lokesh.M is effective in discharging responsibilites assigned to him. During his tenure with us for the above period , we found him efficient, his character and conduct were good.

We wish him all success and growth in his life

Yours Truly,
For Apex I Sys

Balamurugan T S
Director Operations

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25th January 2024
Coimbatore

CERTIFICATE

This is to certify that Mr.MohanSethupathi.A ,Student of B.E (Electronics and Communication Engineering), Third Year, JCT COLLEGE OF ENGINEERING & TECHNOLOGY, COIMBATORE has undergone an Internship Training from 19/01/2024 to 25/01/2024 at ASCENTZ TECHNOLOGIES, Coimbatore and has been trained in Embedded System.

We wish him success in all his future endeavours.

For Ascentz Technologies

HR Manager

ASCENTZ TECHNOLOGIES
Solutions you can count on...

CORPORATE OFFICE:
#383/11, 2nd Floor, D.A. Complex, Cross Cut Road
7th Street, Gandhipuram, Coimbatore - 641 012
Phone : 0422 - 4213170
Mobile : 900 350 2338
E-mail : ascentztech@gmail.com

25th January 2024
Coimbatore

CERTIFICATE

This is to certify that Mr.Monaboti Ganga Mahesh ,Student of B.E (Electronics and Communication Engineering), Third Year, JCT COLLEGE OF ENGINEERING & TECHNOLOGY, COIMBATORE has undergone an Internship Training from 19/01/2024 to 25/01/2024 at ASCENTZ TECHNOLOGIES, Coimbatore and has been trained in Embedded System.

We wish him success in all his future endeavours.

For Ascentz Technologies

HR Manager

APEX I SYS

MM Towers,
No: 2X89+X8W, 3rd Floor,
3rd Cross Cut Street,
Gandhipuram, Coimbatore -12.

22/06/2024

INTERNSHIP CERTIFICATE

This is to certify that **Mr.NANDIBATHINI VENKATESH** has successfully completed Internship on **"Embedded System"** in our organization from 17/06/2024 to 22/06/2024. We found Mr.Nandibathini Venkatesh is effective in discharging responsibilites assigned to him. During his tenure with us for the above period , we found him efficient, his character and conduct were good.

We wish him all success and growth in his life

Yours Truly,
For Apex I Sys

Balamurugan T S
Director Operations

APEX I SYS Coimbatore-12

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APEX I SYS

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No: 2X89+X8W, 3rd Floor,
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Gandhipuram, Coimbatore -12.

22/06/2024

INTERNSHIP CERTIFICATE

This is to certify that **Mr.NARE JAGADEESH** has successfully completed Internship on **"Embedded System"** in our organization from 17/06/2024 to 22/06/2024. We found Mr.Nare Jagadeesh is effective in discharging responsibilites assigned to him. During his tenure with us for the above period , we found him efficient, his character and conduct were good.

We wish him all success and growth in his life

Yours Truly,
For Apex I Sys

Balamurugan T S
Director Operations

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(भारत सरकार का उपक्रम)
पालक्काड प्लांट
कंजिकोड वेस्ट, पालक्काड-६७८ ६२३, भारत
फोन : (०४९१) २५६६०१० (४ लईन)
फेक्स : (०४९१) २५६६००९
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वेब साईट : www.itiltd-india.com

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Web Site : www.itiltd-india.com

Date:13.08.2023

CERTIFICATE

This is to certify that Mr.NUNE KOTESWARA RAO,B.E (Electronics & Communication Engg.) III year student from JCT COLLEGE OF ENGINEERING & TECHNOLOGY, COIMBATORE; has undergone Internship Training in our Organisation from 07.08.2023 to 13.08.2023 in the following Departments:

1. Manufacturing, PCB, Testing
2. Customer Service Centre, Product Support
3. Planning & Documentation
4. Customer Engineering
5. Purchase
6. Inward Goods & Stores
7. Computer Centre
8. Quality Assurance
9. Computer Centre
10. Plant Electrical, Civil & Mechanical
11. Marketing & Customer Engineering
12. Commercial., Sales & Billing
13. Industrial Engineering
14. Shipping
15. HR

स. अधिकारी- मा. सं.
ASST. OFFICER-HR
आईटीआई लि., कंजिकोड वेस्ट.
ITI Ltd., Kanjikode West
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कंजिकोड वेस्ट, पालक्काड-६७८ ६२३, भारत
फोन : (०४९१) २५६६०१० (४ लईन)
फेक्स : (०४९१) २५६६००९
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Date:13.08.2023

CERTIFICATE

This is to certify that Mr.PORUL CHELVAN.S,B.E (Electronics & Communication Engg.) III year student from JCT COLLEGE OF ENGINEERING & TECHNOLOGY, COIMBATORE; has undergone Internship Training in our Organisation from 07.08.2023 to 13.08.2023 in the following Departments:

1. Manufacturing, PCB, Testing
2. Customer Service Centre, Product Support
3. Planning & Documentation
4. Customer Engineering
5. Purchase
6. Inward Goods & Stores
7. Computer Centre
8. Quality Assurance
9. Computer Centre
10. Plant Electrical, Civil & Mechanical
11. Marketing & Customer Engineering
12. Commercial., Sales & Billing
13. Industrial Engineering
14. Shipping
15. HR

स. अधिकारी- मा. सं.
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ITI Ltd., Kanjikode West
पालक्काड / Palakkad-678 623

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(भारत सरकार का उपक्रम)
पालक्काड प्लांट
कंजिकोड वेस्ट, पालक्काड-६७८ ६२३, भारत
फोन : (०४९१) २५६६०१० (४ लईन)
फेक्स : (०४९१) २५६६००९
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Date:13.08.2023

CERTIFICATE

This is to certify that Ms.REDDYGARI CHETHANA,B.E (Electronics & Communication Engg.) III year student from JCT COLLEGE OF ENGINEERING & TECHNOLOGY, COIMBATORE; has undergone Internship Training in our Organisation from 07.08.2023 to 13.08.2023 in the following Departments:

1. Manufacturing, PCB, Testing
2. Customer Service Centre, Product Support
3. Planning & Documentation
4. Customer Engineering
5. Purchase
6. Inward Goods & Stores
7. Computer Centre
8. Quality Assurance
9. Computer Centre
10. Plant Electrical, Civil & Mechanical
11. Marketing & Customer Engineering
12. Commercial., Sales & Billing
13. Industrial Engineering
14. Shipping
15. HR

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APEX I SYS

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Gandhipuram, Coimbatore -12.

22/06/2024

INTERNSHIP CERTIFICATE

This is to certify that **Mr.SANJAY.K** has successfully completed Internship on **"Embedded System"** in our organization from 17/06/2024 to 22/06/2024. We found Mr.Sanjay.K is effective in discharging responsibilites assigned to him. During his tenure with us for the above period , we found him efficient, his character and conduct were good.

We wish him all success and growth in his life

Yours Truly,
For Apex I Sys

Balamurugan T S
Director Operations

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Branch Office: No. 18/47 (22), 3rd Floor, Surya Corner, English Church Road, Opp. Big Bazaar Super Market, Palakkad - 678 001.
Tel: 0491- 6000177, 2504570 / 71.

DATE :18/06/2024

CERTIFICATE

This is to certify that **Mr.Sannithi Sukesh S** has undergone training for below mentioned topics as a part of **Embedded System Awareness Workshop** by Accel IT Academy Palakkad. (Training division of Accel Frontline Global IT Service Limited. He has successfully completed the said training and has gain very good knowledge.

1. Simulation in Proteus design suite
2. Embedded C Programming
3. PIC micro controller programming with Hardware Architecture

Total duration for the said training was 12 hours including practical sessions starting from 12/06/2024 to 18/06/2024.

We wish Mr.SANNITHI SUKESH S for very bright career ahead.

Ratheesh Kesh
Centre Manager
Accel IT Academy
Palakkad

ACCEL IT ACADEMY
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Tel: 0491- 6000177, 2504570 / 71.

DATE :18/06/2024

CERTIFICATE

This is to certify that **Ms.Shaik Nafiya Tabasum** has undergone training for below mentioned topics as a part of **Embedded System Awareness Workshop** by Accel IT Academy Palakkad. (Training division of Accel Frontline Global IT Service Limited. She has successfully completed the said training and has gain very good knowledge.

1. Simulation in Proteus design suite
2. Embedded C Programming
3. PIC micro controller programming with Hardware Architecture

Total duration for the said training was 12 hours including practical sessions starting from 12/06/2024 to 18/06/2024.

We wish Ms.SHAIK NAFIYA TABASUM for very bright career ahead.

Ratheesh Kelath
Centre Manager
Accel IT Academy
Palakkad

JCT College of Engineering and Technology
Approved by AICTE, New Delhi, Affiliated to Anna University, Chennai & Accredited by NAAC
Pichanur, Coimbatore - 641105 | info@jct.ac.in | www.jct.ac.in | 0422 2630900

PROJECT BATCH

ECE(2023-24)

Batch	YEAR/ SEM	Reg.No	Name of the Student	Name of the Guide	Project Title	TIME
1	IV / VIII	720920106002	DHANUJNAI N A	BABU.K	INTEGRATED SMART IRRIGATION AND PEST MONITORING SYSTEM USING IOT	9.30 AM TO 9.45 AM
		720920106003	JANGAMSETTY SAI KIRAN			
		720920106007	STEPHEN ROY S			
		720920106009	YARRA BANU PRAKASH			
2		720920106001	BARATH.P	MOHANAPRIYA.S	IMAGE PROCESSING ALGORITHM FOR PORTABLE X-RAY DEVICES	9.45 AM TO 10.00 AM
		720920106004	NANDHAKUMAR Y			
		720920106006	T SATHISHKUMAR			
		720920106303	SIDDARTH G			
3	II / IV M.E VLSI	720922415001	SILPA.S	THAHSEEN THAHIR	HIGH PERFORMANCE FIR FILTER BASED ON LUT MULTIPLIER AND PARALLEL PREFIX ADDER	10.00 AM TO 10.15 AM

PROJECT COORDINATOR

HOD

PRINCIPAL

PRINCIPAL
JCT College of Engineering & Technology
PICHANUR, COIMBATORE - 641 105.

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IMAGE PROCESSING ALGORITHM FOR PORTABLE X-RAY DEVICES

A PROJECT REPORT

Submitted by

BARATH P	**720920106001**
NANDHAKUMAR Y	**720920106004**
SATHISHKUMAR T	**720920106006**
SIDDARTH G	**720920106303**

In the partial fulfillment for the award of the degree

of

BACHELOR OF ENGINEERING

In

ELECTRONICS AND COMMUNICATION ENGINEERING

JCT COLLEGE OF ENGINEERING AND TECHNOLOGY,

PICHANUR,COIMBATORE - 641 105

ANNA UNIVERSITY: CHENNAI - 600 025

MAY 2024

PRINCIPAL
JCT College of Engineering & Technology
PICHANUR, COIMBATORE - 641 105.

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ANNA UNIVERSITY: CHENNAI 600 025

BONAFIDE CERTIFICATE

Certified that this project report**"IMAGE PROCESSING ALGORITHM FOR PORTABLE X-RAY DEVICES"** is the bonafide work of **"SATHISHKUMAR .T,SIDDARTH .G,BARATH .P,NANDHAKUMAR .Y"** who carried out the project work under my supervision.

V.J. 10/5/24
SIGNATURE

Dr.V.J.ARULKARTHICK Ph.D.,
HEAD OF THE DEPARTMENT
Department of Electronics
And Communication Engineering
JCT College of Engineering and
Technology,
Coimbatore – 641105

S. Mohanapriya 10/5/24
SIGNATURE

Prof. S MOHANAPRIYA M.E.
ASSISTANT PROFESSOR
Department of Electronics
And Communication Engineering
JCT College of Engineering and
Technology,
Coimbatore - 641105

Submitted for the University Examination held on 10-05-2024.

Internal Examiner

External Examiner

PRINCIPAL
JCT College of Engineering & Technology
PICHANUR, COIMBATORE - 641 105.

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ABSTRACT

This research presents an innovative image processing algorithm tailored specifically for portable X-ray devices, aiming to improve image quality, reduce noise, and enhance diagnostic accuracy. The algorithm employs a multi-step approach, beginning with preprocessing techniques such as noise reduction and contrast enhancement to optimize image clarity. Subsequently, advanced filtering methods, including edge detection and morphological operations, are applied to highlight anatomical structures and pathological features.Furthermore, adaptive histogram equalization is utilized to enhance local contrast and mitigate the effects of overexposure or underexposure in different regions of the image. The algorithm also incorporates machine learning techniques for automatic artifact detection and removal, thereby reducing the need for manual intervention and expediting the diagnostic process. Validation of the proposed algorithm was conducted using a diverse dataset of X-ray images acquired from portable devices, demonstrating significant improvements in image quality and diagnostic accuracy compared to conventional methods. Overall, the developed algorithm offers a robust and efficient solution for image processing in portable X-ray devices, with the potential to enhance clinical workflow and improve patient outcomes.

KEY WORDS:Image enhancement, Deep Learning, Convolutional Neural Network.

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INTEGRATED SMART IRRIGATION AND PEST MONITORING SYSTEM USING IOT

A PROJECT REPORT

Submitted by

DHANUJNAI NA	**720920106002**
JANGAMSETTY SAIKIRAN	**720920106003**
STEPHEN ROY S	**720920106007**
YARRA BHANUPRAKASH	**720920106009**

In the partial fulfillment for the award of the degree

of

BACHELOR OF ENGINEERING

in

ELECTRONICS AND COMMUNICATION ENGINEERING

JCT COLLEGE OF ENGINEERING AND TECHNOLOGY,

PICHANUR,

COIMBATORE - 641 105

MAY 2023

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PICHANUR, COIMBATORE - 641 105.

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ANNA UNIVERSITY: CHENNAI - 600 025

BONAFIDE CERTIFICATE

Certified that this project report"**INTEGRATED SMART IRRIGATION AND PEST MONITORING SYSTEM USING IOT**" is the bonafide work of "**DHANUJNAI NA, JANGAM SETTY SAIKIRAN, STEPHEN ROY S, YARRA BHANUPRAKASH**"who carried out the project work under my supervision.

V.J. 9/5/24

SIGNATURE

Dr.V.J ARULKARTHIK Ph.D,

HEAD OF THE DEPARTMENT

Department of Electronics

And Communication Engineering

JCT College of Engineering And

Technology, Coimbatore – 641105

SIGNATURE

Prof. K BABU M.E.

ASSISTANT PROFESSOR

Department of Electronics

And Communication Engineering

JCT College of Engineering And

Technology, Coimbatore - 641105

Submitted for the University Examination held on 10-05-2024

Internal Examiner

External Examiner

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JCT College of Engineering & Technology
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ABSTRACT

'Smart irrigation systems using IoT' technology are gaining significant attention as an efficient solution to the water scarcity challenge in agriculture. These systems consist of sensors, controllers, and a cloud-based platform that collects real-time data about soil moisture content, weather conditions, and plant water requirements.The data is analyzed and used to regulate water supply to the crops, resulting in reduced water consumption and significant savings in water resources. Field experiments have shown that smart irrigation systems can increase crop yields by 25% and reduce water consumption by 40%.

This system is designed to be automated and allows users to monitor and control the irrigation process remotely through a smartphone app or a web interface, making it easy for farmers or gardeners to manage their irrigation systems from anywhere, at any time.Agriculture has always been the primary and the most important sectors of Indian economy. Farmers are the back bone of one's country, so it is important for us to make sure he has the access to resources that are essential. Conventional methods like scare crows are used even today in an agricultural field to avoid birds and animals from feeding on growing crops.

There are many loopholes in such ideas and so improvising agricultural security has become a major issue these days.Thus, this paper focuses on proposing a system which detects the intruders, monitors any suspicious activity and then reports to the owner of the field. It acts as an adaptable system which provides a practicable system to the farmers for ensuring complete safety of their farmlands from any attacks or trespassing activities.

KEY WORDS: Arduino Uno, NodeMcu,Gsm,Water Level Sensor,USB port.

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ICT College of Engineering & Technology
PICHANUR, COIMBATORE - 641 105.

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HIGH PERFORMANCE FIR FILTER BASED ON LUT MULTIPLIER AND PARALLEL PREFIX ADDER

PHASE – II

PROJECT REPORT

Submitted by

SILPA S

In partial fulfilment for the award of the degree of

MASTER OF ENGINEERING IN

VLSI DESIGN

JCT COLLEGE OF ENGINEERING AND TECHNOLOGY

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

ANNA UNIVERSITY CHENNAI
AUGUST 2024

PRINCIPAL
JCT College of Engineering & Technology
PICHANUR, COIMBATORE - 641 105.

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ANNA UNIVERSITY: CHENNAI 600 025
BONAFIDE CERTIFICATE

Certified that this project report titled **"HIGH PERFORMANCE FIR FILTER BASED ON LUT MULTIPLIER AND PARALLEL PREFIX ADDER "**. is the bonafide work of **SILPA S (REGISTER NO : 720922419001)** who carried out the project work under my supervision. Certified further, that to best of my knowledge the work reported herein does not form part of any other project report or dissertation on the basis of which a degree or award was conferred on an earlier occasion on this or any other candidate.

SIGNATURE
Asst.Prof. THAHSEEN THAHIR
ASSISTANT PROFESSOR
Department of ECE,
JCT College of Engineering and Technology
Coimbatore 641 105.

SIGNATURE
Dr. V.J ARULKARTHICK
HEAD OF THE DEPARTMENT
Department of ECE,
JCT College of Engineering and Technology
Coimbatore 641 105.

Submitted for the project Viva – Voce held at JCT College of Engineering and Technology Coimbatore, on..14/8/2024.....

INTERNAL EXAMINER

EXTERNAL EXAMINER

PRINCIPAL
JCT College of Engineering & Technology
PICHANUR, COIMBATORE - 641 105.

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ABSTRACT

Memory-based technology is widely used in various applications of digital signal processing. Compared to other accumulation structures, memory-based structures offer advantages in terms of space and power minimization. Additionally, the access time for memory-based structures is faster than traditional multiplication methods. In the case of the FIR filter, Look-Up Tables (LUTs) are commonly used for performing Multiply-Accumulate (MAC) calculations. This paper proposes a novel approach where the LUT of the FIR filter incorporates the anu-symmetric product coding (APC) and odd-multiple-storage (OMS) techniques, specifically designed for 10 bit signed input and coefficients, to improve the performance of the system. By partitioning the LUT using the APC and OMS approaches, the utilization of the LUT is significantly reduced, resulting in improved power efficiency. This combination of techniques reduces the LUT usage to one fourth compared to traditional FIR-based LUTs. The proposed filter operates on 10-bit signed data based on LUT multiplier and parallel prefix adder, allowing for a wider dynamic range and improved accuracy compared to filters with smaller bit-depths. In processors and in digital circuit designs, adder is an important component.The performance depends on power consumption and delay. Parallel prefix adder [PPA] are kind of adder that uses prefix operation in order to do efficient addition. Like all carry-lookahead adders, the Kogge-Stone adder internally tracks "generate" and "propagate" bits for spans of bits. We start with 1-bit spans, where a single column in the addition generates a carry bit if both inputs are 1 (logical AND), and propagates a carry bit if exactly one input is 1 (logical XOR). Kogge stone adder is an advanced version of parallel prefix adders and also consists of less number of components thus delay is reduced. Like all carry-lookahead adders, the Kogge-Stone adder internally tracks "generate" and "propagate" bits for spans of bits. We start with 1-bit spans, where a single column in the addition generates a carry bit if both inputs are 1 (logical AND), and propagates a carry bit if exactly one input is 1 (logical XOR).

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ELECTRICAL AND ELECTRONICS ENGINEERING

JCT COLLEGE OF ENGINEERING AND TECHNOLOGY

PICHANUR, COIMBATORE - 641105

DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

1.3.3 Number of students undertaking Project work / Field work/ Internships

Academic Year 2023-2024

Programme Name	Programme Code	List of Students undertaking project work/ field work/ Internships	Link to the relevant document
EEE	105	ABISHEK K U	
		AMIL HADHI KAMALUDHEEN	
		ASHIK P S	
		BIPIN KUMAR	
		DHANUSHKUMAR N	
		DHANUSH S	
		JERALD S	
		JOVIN K J	
		PRABHU K	
		LAKSHMI RAGAVI B	
		M D AKRAM HUSSAIN	
		MUHAMMED NIRSHAD M	
		VISHNU M	
		ROBIN ROY	
		SAKTHI K	
		UTHRA KUMAR R	
		VIJAY HANSDA	
		ARUNMANIKANDAN G	
		KAMALESHWARAN J K	
		SHEIK MOHAMED SADHIK	
		VINOTH.M	
		ABHIJITH R	
		AJANYA STEPHY A	
		ANURAGH R	
		ARCHANA S	
		ARJUN KUMAR	
		ARYA MOHAN	
		BATHALA HARINATH	
		BIKKI KUMAR	
		DEIVEEGAN R	
		DHANUSH G	
		DHARSHIK H DAS	
		FAZIL J	
		FRANCIS MARIA THOMSON A	
		GOGULA AMARNATH	
		GONUGUNTA AKHIL KUMAR	
		GOWTHAM J	

		JOB BABU	
		KAMALESHWARAN U	
		KUPPALA PRAVEEN KUMAR	
		KURUVA SREENIVASALU	
		MIDDE GURU TEJA	
		MIDHUN S	
		MOHAMED SHUHAIB CK	
		MOHAMMED SALMAN M	
		MUHAMMED SHIYAS P M	
		MUNTIMADUGU VENKATA PUJITHA LAKSHMI	
		MYNIGARI MADHAN MOHAN	
		NANDHU GOKUL G	
		NATARAJU K	
		PRADEEP M	
		PRADEEP S	
		PRAJIN A P	
		PRAJITHA P	
		PRAVEEN KUMAR G	
		RAJESH R	
		RASHID M	
		SAMIDURAI V	
		SREEHARI K S	
		AKSHAY R	
		MUHAMED FAYAZ	
		SABARI DAS V	
		SAJUDHEEN Y	
		SUMITHRA R	
		ABDUL KARIM ANSARI	
		CHHOTU KUMAR	
		JARWAN KUMAR	
		JAYAPRAKASH A	
		LAKHINDAR KUMAR	
		MD SADDAM HUSSAIN	
		MRIDHUL RAJU	
		PRINCE KUMAR GUPTA	
		RITIK KUMAR	
		SANOJ KUMAR	
		SARAVANAN B	
		SARVESH KUMAR	
		SHAHABUDDIN MANSURI	
		SIJIL JOHNSON	
		VISHNU B	
		AMARNATH M	

		ASHIQ S	
		ASWIN R	
		AYYAPPADAS KM	
		DIKUL	
		FUHAD K	
		HARIKRISHNAN T	
		RESHMA G	
		SRIKANTH M	
		GUDIPATI MANASA	
		ANUMALA VENKATA SANTHOSH	
ME (PED)	**415**	MIDHUN K	

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PICHANUR, COIMBATORE - 641105
DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

Academic Year 2023-2024
List of Students attended in plant training/internships

S.No.	Name of the student	Year/ Sem	In plant training/ Internship
1	ABISHEK K U	II/III	Internship Training
2	AMIL HADHI KAMALUDHEEN		
3	ASHIK P S		
4	BIPIN KUMAR		
5	DHANUSHKUMAR N		
6	DHANUSH S		
7	JERALD S		
8	JOVIN K J		
9	PRABHU K		
10	LAKSHMI RAGAVI B		
11	M D AKRAM HUSSAIN		
12	MUHAMMED NIRSHAD M		
13	VISHNU M		
14	ROBIN ROY		
15	SAKTHI K		
16	UTHRA KUMAR R		
17	VIJAY HANSDA		
18	ARUNMANIKANDAN G		
19	KAMALESHWARAN J K		
20	SHEIK MOHAMED SADHIK		
21	VINOTH.M		
22	MIDHUN K	I/II	

List of Students attended in Mini projects

S. No.	Name of the student	Year/ Sem
1	ABHIJITH R	
2	AJANYA STEPHY A	
3	ANURAGH R	
4	ARCHANA S	
5	ARJUN KUMAR	
6	ARYA MOHAN	
7	BATHALA HARINATH	
8	BIKKI KUMAR	

9	DEIVEEGAN R	III/ VI
10	DHANUSH G	
11	DHARSHIK H DAS	
12	FAZIL J	
13	FRANCIS MARIA THOMSON A	
14	GOGULA AMARNATH	
15	GONUGUNTA AKHIL KUMAR	
16	GOWTHAM J	
17	JOB BABU	
18	KAMALESHWARAN U	
19	KUPPALA PRAVEEN KUMAR	
20	KURUVA SREENIVASALU	
21	MIDDE GURU TEJA	
22	MIDHUN S	
23	MOHAMED SHUHAIB CK	
24	MOHAMMED SALMAN M	
25	MUHAMMED SHIYAS P M	
26	MUNTIMADUGU VENKATA PUJITHA LAKSHMI	
27	MYNIGARI MADHAN MOHAN	
28	NANDHU GOKUL G	
29	NATARAJU K	
30	PRADEEP M	
31	PRADEEP S	
32	PRAJIN A P	
33	PRAJITHA P	
34	PRAVEEN KUMAR G	
35	RAJESH R	
36	RASHID M	
37	SAMIDURAI V	
38	SREEHARI K S	
39	AKSHAY R	
40	MUHAMED FAYAZ	
41	SABARI DAS V	
42	SAJUDHEEN Y	
43	SUMITHRA R	

JCT COLLEGE OF ENGINEERING AND TECHNOLOGY

PICHANUR, COIMBATORE - 641105

DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

List of Students attended in Project work

S. No.	Name of the Student	Year/ Sem
1	ABDUL KARIM ANSARI	IV/VIII
2	CHHOTU KUMAR	
3	JARWAN KUMAR	
4	JAYAPRAKASH A	
5	LAKHINDAR KUMAR	
6	MD SADDAM HUSSAIN	
7	MRIDHUL RAJU	
8	PRINCE KUMAR GUPTA	
9	RITIK KUMAR	
10	SANOJ KUMAR	
11	SARAVANAN B	
12	SARVESH KUMAR	
13	SHAHABUDDIN MANSURI	
14	SIJIL JOHNSON	
15	VISHNU B	
16	AMARNATH M	
17	ASHIQ S	
18	ASWIN R	
19	AYYAPPADAS KM	
20	DIKUL	
21	FUHAD K	
22	HARIKRISHNAN T	
23	RESHMA G	
24	SRIKANTH M	
25	GUDIPATI MANASA	
26	ANUMALA VENKATA SANTHOSH	

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This is certify that Abhishek K U (720922105001), Second year B.E (Electrical and Electronics Engineering) student of JCT College of Engineering and Technology, Pichanur, Coimbatore has completed internship training in our concern from 19/02/2024 to 29/02/2024.

We wish him all the best for his future Endeavors.

Yours Truly,
For Pumo Technovation India Pvt Ltd

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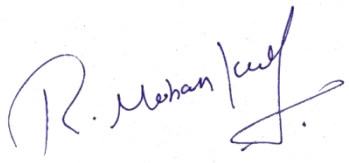

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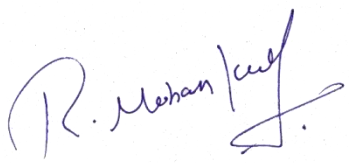

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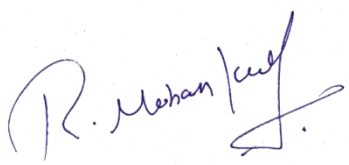

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IPCS automation

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We wish him all the best for his future Endeavours.

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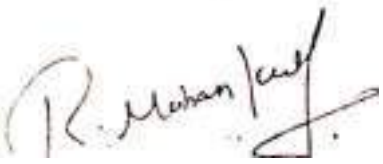

R.MOHAN KUMAR
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This is to certify that **Mr. Bipin Kumar (720922105004)** a student of JCT College of Engineering and Technology, Pichanur, Coimbatore-641105 has done his/her Internship Training in our company held from 10.07.2023 to 21.07.2023 and completed the Training successfully.

VEI Technologies appreciates their interest and involvement, Wishes them all the very best for their Future.

VEI TECHNOLOGIES 600 056 CHENNAI

Dr.B.Ezhilavan,
Managing Director,
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This is to certify that **Mr. Dhanush S, (720922105006),** a student of JCT College of Engineering and Technology, Pichanur, Coimbatore-641105 has done his Internship Training in our company held from 10.07.2023 to 21.07.2023 and completed the Training successfully.

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VEI TECHNOLOGIES 600 056 CHENNAI

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RENEWABLE ENERGY SYSTEM USING AIR DRAG FORCE IN HIGHWAYS

A Mini Project Report

Submitted by

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BIKKI KUMAR	**(720921105011)**
PRADEEP M	**(720921105036)**
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Submitted In partial fulfillment for the award of the degree of

BACHELOR OF ENGINEERING

IN

ELECTICAL AND ELECTRONICS ENGINEERING

JCT COLLEGE OF ENGINEERING AND TECHNOLOGY

ANNA UNIVERSITY: CHENNAI 600 025

MARCH &2024

ABSTRACT

In this project, we propose a novel approach to harness renewable energy from the airflow generated by passing vehicles on highways. Turbines are strategically placed on the highway divider, and as vehicles move, the airflow causes the turbines to rotate, generating electricity. The generated power is stored in two sets of batteries, ensuring continuous operation by alternating between charging and discharging cycles. The system is equipped with Arduino-based control to manage the charging and discharging process efficiently. The generated electricity can be utilizedfor various purposes, including charging electric vehicles (EVs) on the highway and supplying power to the grid, contributing to sustainable energy practices and reducing dependence on fossilfuels. Through this project, we aim to explore the feasibility and effectiveness of utilizing roadside turbines for renewable energy generation and to provide a sustainable solution for meeting the energy demands of modern transportation infrastructure.

SECURITY MANAGEMENT SYSTEM USING RFID TECHNOLOGY AND FSR SENSOR WITH ARDUINO UNO

A Mini Project Report

Submitted by

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MARCH & 2024

ABSTRACT

This paper presents the design and implementation of a comprehensive security management system leveraging Radio Frequency Identification (RFID) technology and Force-Sensitive Resistor (FSR) sensors, integrated with Arduino Uno microcontroller. The proposed system aims to provide robust security measures for various applications, including access control, asset tracking, and intrusion d The RFID technology is employed for secure authentication and identification of users or assets, while FSR sensors are utilized to detect physical force or pressure changes, such as unauthorized access attempts or tampering. The Arduino Uno microcontroller acts as the central processing unit, facilitating real-time monitoring, decision-making, and control functionalitie. Key components of the system include RFID reader/writer modules, FSR sensors, Arduino Uno board, and a user interface for interaction and configuration. Upon RFID authentication, the system evaluates FSR sensor data to determine the integrity of the secured area or asset. Any detected anomalies trigger immediate alerts or predefined actions, ensuring timely response to security breaches. The proposed system offers several advantages, including high accuracy in user or asset identification, real-time monitoring capabilities, scalability for integration with existing security infrastructure, and cost-effectiveness. Additionally, the flexibility of Arduino Uno enables customization and expansion of functionality to meet specific application requirements.Experimental results demonstrate the effectiveness and reliability of the proposed security management system in safeguarding against unauthorized access and ensuring the integrity of protected assets. Future work includes enhancing system scalability, optimizing power consumption, and exploring additional security features to address evolving threats in diverse environments.

CHAPTER 1

INTODUCTION

1.1 General Background

A security management system using RFID technology and FSR (Force-Sensitive Resistor) sensor with Arduino UNO typically involves integrating RFID readers for access control and FSR sensors for detecting physical pressure or touch. Here's a general background:RFID Technology: Radio-Frequency Identification (RFID) uses electromagnetic fields to automatically identify and track tags attached to objects. In security systems, RFID tags can be embedded in access cards or badges, allowing authorized individuals to gain entry when scanned by RFID readers.FSR Sensor: FSR sensors are pressure-sensitive devices that change resistance based on the amount of force applied to their surface. They can detect touch, pressure, or squeezing. In a security system, FSR sensors can be used to detect physical tampering or unauthorized access attempts.Arduino UNO: Arduino UNO is a popular micro-controller board widely used in DIY electronics projects. It provides an easy-to-use platform for interfacing with sensors, actuators, and other electronic components. It can be programmed using the Arduino IDE (Integrated Development Environment).Integration: In a security management system, the Arduino UNO serves as the central control unit. It interfaces with the RFID reader to authenticate users based on scanned RFID tags/cards. Additionally, it monitors FSR sensors placed at sensitive access points or areas to detect unauthorized physical access attempts or tampering.Functionality: The system can be programmed to perform various actions based on RFID authentication and FSR sensor inputs. For example, upon successful RFID authentication, it can unlock a door or activate a security system. If unauthorized access or tampering is detected by the FSR sensor, it can trigger an alarm or notify security personnel.Programming: Developing the system involves writing code in Arduino's programming language, which is based on C/C++. The code will include instructions for interfacing with the RFID reader and FSR sensor, processing input data, and controlling output actions.Security Considerations: It's crucial to implement proper security measures to prevent unauthorized access to the system itself and ensure the integrity of the security functions. This includes encryption of RFID data, implementing secure authentication protocols, and protecting against physical tampering.Testing and Deployment: Before deployment, the system should undergo thorough testing to

CHAPTER-8

FUTURE SCOPE AND CONCLUSION

Future Scope:

The proposed security system for clothing stores using RFID technology and force-sensitive resistors (FSR) presents several avenues for future development and enhancement. Firstly, further research and innovation could focus on refining the system's detection capabilities to improve accuracy and reduce false alarms. Additionally, integration with advanced analytics and machine learning algorithms could enable predictive analysis of theft patterns, allowing for proactive security measures. Furthermore, exploring the potential integration of the system with other emerging technologies such as artificial intelligence (AI) and Internet of Things (IoT) devices could unlock new functionalities and enhance overall system efficiency. Moreover, collaboration with industry stakeholders and policymakers could facilitate the adoption of standardized protocols and regulations for RFID-based security systems in retail environments, fostering widespread implementation and acceptance.

Conclusion:

In conclusion, the proposed security system represents a significant advancement in retail security technology, offering an automated and efficient solution for preventing theft and safeguarding merchandise in clothing stores. By leveraging RFID technology and force-sensitive resistors (FSR), the system provides real-time monitoring and detection of unauthorized removal of security tags, enabling quick response and intervention by store personnel. The system's versatility, cost-effectiveness, and scalability make it suitable for various retail settings, promising widespread adoption and impact. Looking ahead, continued research and innovation in this field holds the potential to further enhance

the system's capabilities and contribute to a safer and more secure shopping experience for both retailers and customers.

LINE FOLLOWER CAR USING ARDUINO

A Mini Project Report

Submitted by

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IN

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MARCH & 2024

CHAPTER 1

INTRODUCTION

In the realm of robotics, the development of autonomous vehicles has garnered significant attention due to their potential applications in various fields such as industrial automation, transportation, and education. This report documents the design and implementation process of a line-following car utilizing Arduino technology. The project aimed to create a versatile and efficient autonomous vehicle capable of following predefined paths accurately. By integrating Arduino microcontrollers, infrared sensors, and motor drivers, the line-following car was engineered to navigate through complex environments autonomously. The report outlines the methodology, hardware components, software algorithms, and experimental results, providing insights into the challenges encountered and solutions devised during the development process.

The emergence of Arduino microcontrollers has democratized the field of robotics, enabling enthusiasts, hobbyists, and students to embark on innovative projects with relative ease. Among the myriad applications, line-following cars have become a popular choice for introductory robotics projects due to their simplicity and practicality. These vehicles rely on sensors to detect contrasting lines on a surface and adjust their movement accordingly, mimicking basic navigation principles observed in nature.

This report details the design and implementation of a line-following car using Arduino, aiming to provide a comprehensive understanding of the development process from concept to execution. The project leverages the versatility of Arduino boards, the precision of infrared sensors, and the control capabilities of motor drivers to create a functional and adaptable autonomous vehicle. Through a combination of hardware integration, software programming, and iterative testing, the line-following car was engineered to demonstrate efficient navigation along predefined paths.

CHAPTER 5

CONCLUSION

In conclusion, the design and implementation of a line-following car using Arduino technology exemplify the fusion of creativity, engineering, and innovation in the field of robotics. By leveraging the flexibility and accessibility of Arduino microcontrollers, this project demonstrates the potential for individuals of all backgrounds to engage in hands-on experimentation and learning. The development process outlined in this report offers valuable insights into the challenges and opportunities inherent in robotics projects, paving the way for future advancements in autonomous vehicle technology

MAGNETIC SENSOR BASED ARDUINO UNO CONTROLLED AUTOMATIC POWER SUPPLY ON AND OFF SYSTEM

A Mini Project Report

Submitted by

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PICHANUR, COIMBATORE.

ANNA UNIVERSITY: CHENNAI 600 025

March 2024

CHAPTER 1
INTRODUCTION

In the realm of home automation, the integration of smart devices has revolutionized how we interact with our living spaces. The ability to control lighting systems intelligently not only enhances convenience but also contributes to energy efficiency. This report introduces an Arduino Uno-based door sensor system designed to seamlessly switch on and off lights based on the door's status, offering a practical and energy conscious solution for smart homes. Smart lighting solutions have gained popularity for their ability to enhance user experience and optimize energy consumption. Integrating door sensors into lighting control systems provides an automated approach, ensuring that lights are activated only when necessary. This concept aligns with the broader goal of creating sustainable and responsive living environments. The primary objective of this project is to harness the capabilities of the Arduino Uno microcontroller to create an intelligent door sensor that directly influences lighting systems. By employing a reed switch to detect the door's open or closed state, the Arduino Uno orchestrates the switching on and off of lights. This not only adds an element of automation but also contributes to energy savings by ensuring lights are active only when required. The significance of an Arduino Uno-based door sensor for lighting control lies in its potential to optimize energy usage and enhance user experience. This solution addresses the common scenario of lights being unintentionally left on when rooms are unoccupied. By automating this process based on the door's status, users can enjoy a more energy-efficient and streamlined home environment. This project's scope encompasses the entire lifecycle of creating a door sensor system using Arduino Uno for lighting control.

From selecting components and circuit setup to programming the microcontrol and testing the system, each step contributes to achieving the overarching goal of creating an effective and user-friendly smart home solution. This report unfolds in a structured manner, guiding the reader through the various stages of implementing an Arduino Uno-based door sensor for lighting control. From the initial hardware setup to programming logic and real-world testing, each section provides insights into the functionalities and considerations of the system. The ultimate aim is to empower readers to understand, customize, and implement an intelligent lighting control system within their home automation projects.

SMART BLIND WALKING STICK USING ARDUINO

A PROJECT REPORT

Submitted by

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Submitted in partial fulfilment for the award of the degree

of

BACHELOR OF ENGINEERING

in

ELECTRICAL AND ELECTRONICS ENGINEERING

JCT COLLEGE OF ENGINEERING AND TECNOLOGY

ANNA UNIVERSITY: CHENNAI 600 025

MARCH&2024

ABSTRACT

A smart stick concept is devised to provide a smart electronic aid for blind people .Blind and visually impaired find difficulties in detecting obstacles during walking in the street. The system is intended to provide artificial vision and object detection, real time assistance via making use of Arduino UNO.

The main objective of our project is to provide a sound based assistance to blind people. The existing devices for the visually impaired only focus on travelling from one location to another. The device is aimed to help visually impaired with the same maneuver as that of sighted people. A brief study had been carried out to understand various issues related to the project which involves providing a smart electronic aid for blind people to provide artificial vision and object detection, real assistance via GPS module by using Arduino Uno.

Our project mainly focuses on the visually impaired people who cannot walk independently environment. The system consists of ultrasonic sensors, and the feedback is receive through audio. The aim of the overall system is to provide a low cost and efficient navigation and obstacle detection aid for blind which gives which gives a sense of artificial by providing information about the environmental scenario of static and dynamic object round them, so that they can walk independently.

CHAPTER 7

CONCLUSIONS AND FUTURE SCOPE

7.1 Conclusions

The project proposed the design and architecture of a new concept of Smart Electronic Guiding Stick for blind people. The blind stick proposed in this paper can aid the visually impaired user by helping him/her navigate through different terrains and obstacles. The advantage of the system lies in the fact that it can prove to be very low cost solution to millions of blind person worldwide. The proposed combination of various working units makes a real-time system that monitors psoition of the user and provide dual feedback making navigation more safe and secure. It can be further improved to have more decision taking capabilities by employing varied types of sensors and thus could be used for different applications. It aims to solve the problems faced by the blind people in their daily life. The system also takes measures to ensure their safety.

SENSOR-BASED GAS DETECTION SYSTEM

A PROJECT REPORT

Submitted by

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ANNA UNIVERSITY: Coimbatore - 600025

March 8 2024

ABSTRACT

Liquefied Petroleum Gas (LPG) is a main source of fuel especially in urban areas because it is clean compared to firewood and charcoal. Gas leakage is a major problem in the industrial sector, residential premises, etc. Nowadays, home security has become a major issue because of increasing gas leakage. Gas leakage is a source of great anxiety with ateliers, residential areas and vehicles like Compressed Natural Gas (CNG) buses and cars which are run on gas power. One of the preventive methods to stop accidents associated with the gas leakage is to install a gas leakage detection kit at vulnerable places. The aim of this paper is to propose and discuss a design of a gas leakage detection system that can automatically detect, alert and control gas leakage. This proposed system also includes an alerting system for the users. The system is based on a sensor that easily detects a gas leakage.

DISTANCE MEASUREMENT USING ULTRASONIC SENSOR AND ARDUINO UNO

A PROJECT REPORT

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MARCH & 2024

ABSTRACT

The work presented in this paper highlights about the design & development of an LED indicator for various of engineering applications. The project is designed to develop distance measurement system using ultrasonic waves and interfaced with Arduino. We know that human audible range is 20hz to 20khz. We can utilize these frequency range waves through ultrasonic sensor HC-SR04.The advantages of this sensor when interfaced with Arduino which is a control and sensing system, a proper distance measurement can be made with new techniques. As large amounts are spent for hundreds of inflexible circuit boards, the Arduino will allow business to bring many more unique devices. This distance measurement system can be widely used as range meters and as proximity detectors in industries. The hardware part of ultrasonic sensor is interfaced with Arduino. This method of measurement is efficient way to measure small distances precisely. The distance of an obstacle from the sensor is measured through ultrasonic sensor. After knowing the speed of sound the distance can be calculated.

ACCIDENT PREVENT USING EYE BLINK SENSOR

A MINI PROJECT

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ANNA UNIVERSITY : CHENNAI 600025

March , 2024

ABSTRACT

Accidents caused by driver drowsiness and distraction remain a significant concern in road safety. This study proposes a novel approach to accident prevention utilizing an eyeblink sensor system. The system detects the driver's eyeblink patterns and employs real-time analysis to assess the driver's level of fatigue or distraction.

The methodology involves the development of a wearable eyeblink sensor device integrated into the vehicle's dashboard. The sensor continuously monitors the driver's eyeblink frequency and duration, utilizing machine learning algorithms to interpret patterns indicative of drowsiness or distraction.

Upon detection of potential fatigue or distraction, the system triggers timely alerts to the driver, such as audible alarms or visual warnings on the dashboard display, prompting the driver to take corrective action or pull over safely. Additionally, the system can communicate with other safety features in the vehicle, such as adaptive cruise control or lane-keeping assist, to provide additional support in mitigating potential accidents.

The effectiveness of the proposed system in accident prevention was evaluated through simulated driving scenarios and real-world road tests. Results indicate a significant reduction in the incidence of accidents and near-misses when the eyeblink sensor system is active, highlighting its potential as a proactive safety measure in vehicles.In conclusion, the integration of an eyeblink sensor system holds promise as an effective tool for accident prevention by detecting and mitigating driver fatigue and distraction in real-time, thereby enhancing road safety and reducing the risk of accidents on the highways. Further research and development are warranted to refine the system's performance and ensure its widespread implementation in vehicles.

SMART IRRIGATION SYSTEM USING ARDUINO

A Mini Project Report

Submitted by

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MARCH 2024

ABSTRACT

This paper proposes the intelligent irrigation system and crop protection. The wang micro controller water wastage is main problem in agriculture sector The setup uses soil moisture sensor which measures the moisture content in the soil. Other than soil moisture senor, we are using humidity sensor, temperature sensor in order to get the accurate and perfect measures that has to be taken for a good and better cultivation and therefore more profit. Smart irrigation reduces wastage of water, fertilizers and increases the crop yield. Here a system is proposed to monitor crop-field using sensors for soil moisture, humidity and temperature. By monitoring these parameters the irrigation system can be automated if soil moisture is low.

Irrigation management is a complex decision making process to determine when and how much water to apply to a growing crop to meet specific management objectives. If the farmer is far from the agricultural land he will not be noticed of current conditions. So, efficient water management plays an important role in the irrigated agricultural cropping systems This project probes into the design of the automated irrigation system based on Arduino UNO This Embedded project is to design and develop a low-cost feature which is based on embedded platform for water irrigation system. This project uses temperature and soul moisture sensors to detect the water quantity present in agriculture. The project uses Arduino UNO micro controller which es controller to process the information

MICRO HYBRIDIZATION BASED PARALLEL CONNECT ELECTRIC VEHICLE

A PROJECT REPORT

Submitted by

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SARVESH KUMAR (720920105017)

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IN

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ANNA UNIVERSITY:: CHENNAI 600 025

MAY 2024

BONAFIDE CERTIFICATE

Certified that this project report "**MICRO HYBRIDIZATION BASED PARALLEL CONNECT ELECTRIC VEHICLE**" is the bonafide work of "**ABDUL KARIM ANSARI, JARWAN KUMAR, MD SADDAM HUSSAIN, SARVESH KUMAR**" who carried out the project under my supervision.

HEAD OF THE DEPARTMENT

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SUPERVISOR

Mr.D.NAGARAJAN,
Assistant Professor,
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Coimbatore - 641105

Submitted for the project Viva-Voce Examination held at

JCT College of Engineering and Technology on 13/05/2024.

Internal Examiner

External Examiner

ABSTRACT

The project is about to power up the electric cars and achieves the maximum distance of running. The electric car most commonly seen in the roads but the main problem of electric vehicle are there is no continues recharging sources, so implementing a new project on electric vehicle by using battery and combustion engine. In present scenario, the world is facing shortage of fossil fuels and hike in their prices due to ever increasing demand. Henceforth, it has become imperative to revolutionize our way of living by initiating green revolution in automobile industry. The biggest concern for the world population today is to breathe fresh air and thus combat related health issues. This project focuses on hardware development of Hybrid Electric vehicle to address this severe situation and has been coupled with green technologies. battery and regenerative braking; generally the braking system for a car is based on hydraulic braking technology. However, this traditional braking methodology causes a lot of energy wastage since it produces unwanted heat during braking. In regenerative mode, the braking uses a generator; the main systems that we are using are DC motor, combustion engine, Charge Controller, Batteries, Boost Converter, Step-down Transformer; Diode Rectifier Experimental results are presented to confirm the theoretical analysis.

Overall, HEVs offer several benefits, including improved fuel economy, reduced emissions, and increased energy efficiency. However, they also present some challenges, with continued advancements in technology and increasing demand for more environmentally friendly transportation options, HEVs are likely to play a significant role in the future of the automotive industry.

01	Literature review.	PO1,PO2,PSO1,PSO2
02	Problem Identification.	PO1,PO2,PO3,PO4,PO6,PSO1,PSO2
03	Modern Tools Usage.	PO5,PO12,PSO2
04	To prepare Project Report.	PO8,PO9
05	Project Reviews to be attended.	PO9,PO10,PSO2

JCT COLLEGE OF ENGINEERING AND TECHNOLOGY

Pichanur, Coimbatore-641105

Department of Electrical and Electronics Engineering

ABSTRACT VS POs MAPPING

PROGRAM: ELECTRICAL AND ELECTRONICS ENGINEERING	DEGREE : B. E
COURSE: PROJECT WORK	SEMESTER : VIII CREDITS: 10
COURSE CODE: EE8811 REGULATION: 2017	COURSE TYPE : LABORATORY (CORE)
COURSE AREA/DOMAIN: ELECTRICAL	CONTACT HOURS : 300 Hrs / sem

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720920105004	JARWAN KUMAR		
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ABSTRACT:

UNIT	DETAILS	TOTAL HOURS
PROJECT TITLE	Micro Hybridization Based Parallel Connect Electric Vehicle	300
PROJECT ABSTRACT	The project is about to power up the electric cars and achieves the maximum distance of running. This project focuses on hardware development of Hybrid Electric vehicle to address this severe situation and has been coupled with green technologies, battery and regenerative braking.	
PROJECT CONCLUSION	Hybrid-electric vehicles (HEVs) combine the benefits of both IC engines and electric motors and can be configured to obtain different objectives, such as improved fuel economy, increased power, or additional auxiliary power for electronic devices and power tools.	

MICRO HYBRIDIZATION BASED PARALLEL CONNECT ELECTRIC VEHICLE

Internet of Things (IOT) Based Smart Energy Meter Reading using Node MCU ESP32 with Blynk Cloud

A PROJECT REPORT

Submitted by

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LAKHINDAR KUMAR	**(720920105007)**
PRINCE KUMAR GUPTA	**(720920105012)**

in partial fulfillment for the award of the degree

of

BACHELOR OF ENGINEERING

in

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JCT COLLEGE OF ENGINEERING AND TECHNOLOGY

COIMBATORE : 641105

ANNA UNIVERSITY :: CHENNAI 600025

MAY 2024

ANNA UNIVERSITY: CHENNAI 600025

BONAFIDE CERTIFICATE

Certified that this main project report **"INTERNET OF THING (IOT) BASED SMART ENERGY METER READING USING NODE MCU ESP32 WITH BLYNK CLOUD"** is the bonafide work of **"CHHOTU KUMAR, LAKHINDAR KUMAR, PRINCE KUMAR GUPTA"** who carried out the main project work under my supervision.

Signature of the Head of the Department

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INTERNAL EXAMINER

EXTERNAL EXAMINER

ABSTRACT

In recent years, the Smart Energy Meter has attracted a lot of attention from all over the world. In this project a design and prototyping a low cost IoT energy monitoring is presented, which may be utilized in a variety of applications such as power billing, smart grid energy management, and home automation. The system is based on a low cost ESP32 micro controller that is interfaced non-invasive Current Transformer (CT) sensors, and voltage sensor to get data from sensor nodes and deliver it to a Blynk server over the internet. The studies' findings showed that the system for monitoring energy consumption can precisely record voltage, current, active power, and cumulative power consumption. Smart Metering with its unique performance with the Internet of Things (IoT) tend to be an efficient system for electricity management, secure against the intervention by third parties, and reliable for tracking and real time remote monitoring. Hence, this project work is accomplished by analyzing available functions and journals on the existing design of Smart Metering and discussed on further preferable application. The proposed system leverages IoT principles to enhance traditional energy metering infrastructure by enabling remote monitoring and management functionalities. By employing sensors and micro controllers, the smart meter collects energy consumption data and communicates it wireless to the Blynk cloud server via Wi-Fi or GSM network.

[illegible]	Literature review.	PO1,PO2,PSO1,PSO2
[illegible]	Problem Identification.	PO1,PO2,PO3,PO4 PO6,PSO1,PSO2
[illegible]	Modern Tools Usage.	PO5,PO12,PSO2
[illegible]	To prepare Project Report.	PO8,PO9
[illegible]	Project Reviews to be attended.	PO9,PO10,PSO2

JCT

JCT COLLEGE OF ENGINEERING ANDTECHNOLOGY

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Department of Electrical & Electronics Engineering

ABSTRACT VS POs MAPPING

PROGRAM: ELECTRICAL AND ELECTRONICS ENGINEERING	DEGREE: B. E
COURSE: PROJECT WORK	SEMESTER: VIII CREDITS: 10
COURSE CODE: EE8811 REGULATION: 2017	COURSE TYPE: LABORATORY (CORE)
COURSE AREA/DOMAIN: ELECTRICAL	CONTACT HOURS: 300 Hrs / sem

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720920105007	LAKHINDAR KUMAR		
720920105012	PRINCE KUMAR GUPTA		

ABSTRACT:

UNIT	DETAILS	TOTAL HOURS
PROJECT TITLE	Internet of Things (IOT) Based Smart Energy Meter Reading using Node MCU ESP32 with Blynk Cloud	300
PROJECT ABSTRACT	In this project a design and prototyping a low- cost IoT energy monitoring is presented, which may be utilized in a variety of applications such as power billing, smart grid energy management, and home automation.	
PROJECT CONCLUSION	By using this project, they can reduce the manual effort to take the reading from the energy meter which is cost effective. It is user friendly and these can enhance this project, in which an electricity department can send message to the consumer about the billing information.	

JOURNAL / WEB / TEXT / REFERENCE BOOKS:

S.NO.	TITLE OF JOURNAL, BOOK/AUTHORS PUBLICATION
1	Abujubbeh M and Turjman, (2019),"IoT enabled smart grid via SM: An overview", Future Generation Computer Systems, vol. 96, pp. 579-590.
2	S.S. Depuru, (2012), "Modeling detection and prevention of electricity theft for enhanced performance and security of power grid", Doctoral dissertation.

APPENDIX 2

Fig. Complete Hardware Setup

WIRELESS POWER TRANSFER FOR ELECTRIC VEHICLE APPLICATIONS

A PROJECT REPORT

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in partial fulfilment for the award of the degree

of

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IN

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MAY 2024

BONAFIDE CERTIFICATE

Certified that this project report **"WIRELESS POWER TRANSFER FOR ELECTRIC VEHICLE APPLICATIONS"** is the bonafide work of **"RITIK KUMAR, SANOJ KUMAR, SHAHABUDDIN MANSURI"** who carried out the project under my supervision.

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Internal Examiner

External Examiner

ABSTRACT

Wireless power transfer (WPT) using magnetic resonance is the technology which could set human free from the annoying wires. The advances make the WPT very attractive to the electric vehicle (EV) charging applications in both stationary and dynamic charging scenarios. It is clear that vehicle electrification is unavoidable due to environment and energy related issues. Wireless charging will provide many benefits compared to wired charging. In particular, when the roads are electrified with wireless charging capability, it will provide the foundation for mass market penetration for EV regardless of battery technology. Today, the widespread use of mobile electronic devices has brought about the advancement of wireless charging technology. Easy charging of these devices with wireless power transfer provides a wide area for users in terms of usability. Energy transmission efficiency is one of the most important parameters in wireless power transmission, which has become one of the popular fields of study recently. Especially in recent years, many studies have been carried out with different techniques on this subject, which brings advantages such as freedom of movement and ease of use by eliminating the problems caused by the cable.

KEYWORDS: - Arduino board, motor, coil, relay, Microcontroller.

01	Literature review.	PO1, PO2, PSO1, PSO2
02	Problem Identification.	PO1, PO2, PO3, PO4, PO6, PSO1, PSO2
03	Modern Tools Usage.	PO5, PO12, PSO2
04	To prepare Project Report.	PO8, PO9
05	Project Reviews to be attended.	PO9, PO10, PSO2

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ABSTRACT VS POs MAPPING

PROGRAM: ELECTRICAL AND ELECTRONICS ENGINEERING	DEGREE: B. E
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COURSE CODE: EE8811 REGULATION: 2017	COURSE TYPE: LABORATORY (CORE)
COURSE AREA/DOMAIN: ELECTRICAL	CONTACT HOURS: 300 Hrs / Sem

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720920105015	SANOJ KUMAR		
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ABSTRACT:

UNIT	DETAILS	TOTAL HOURS
PROJECT TITLE	Wireless Power Transfer for Electric Vehicle Applications	300
PROJECT ABSTRACT	This Project presented a review of wireless charging of electric vehicles.	
PROJECT CONCLUSION	Over the next decade, there will be a rapid roll-out of wireless charging infrastructure, initially in off-road parking applications soon after standardizations completes.	

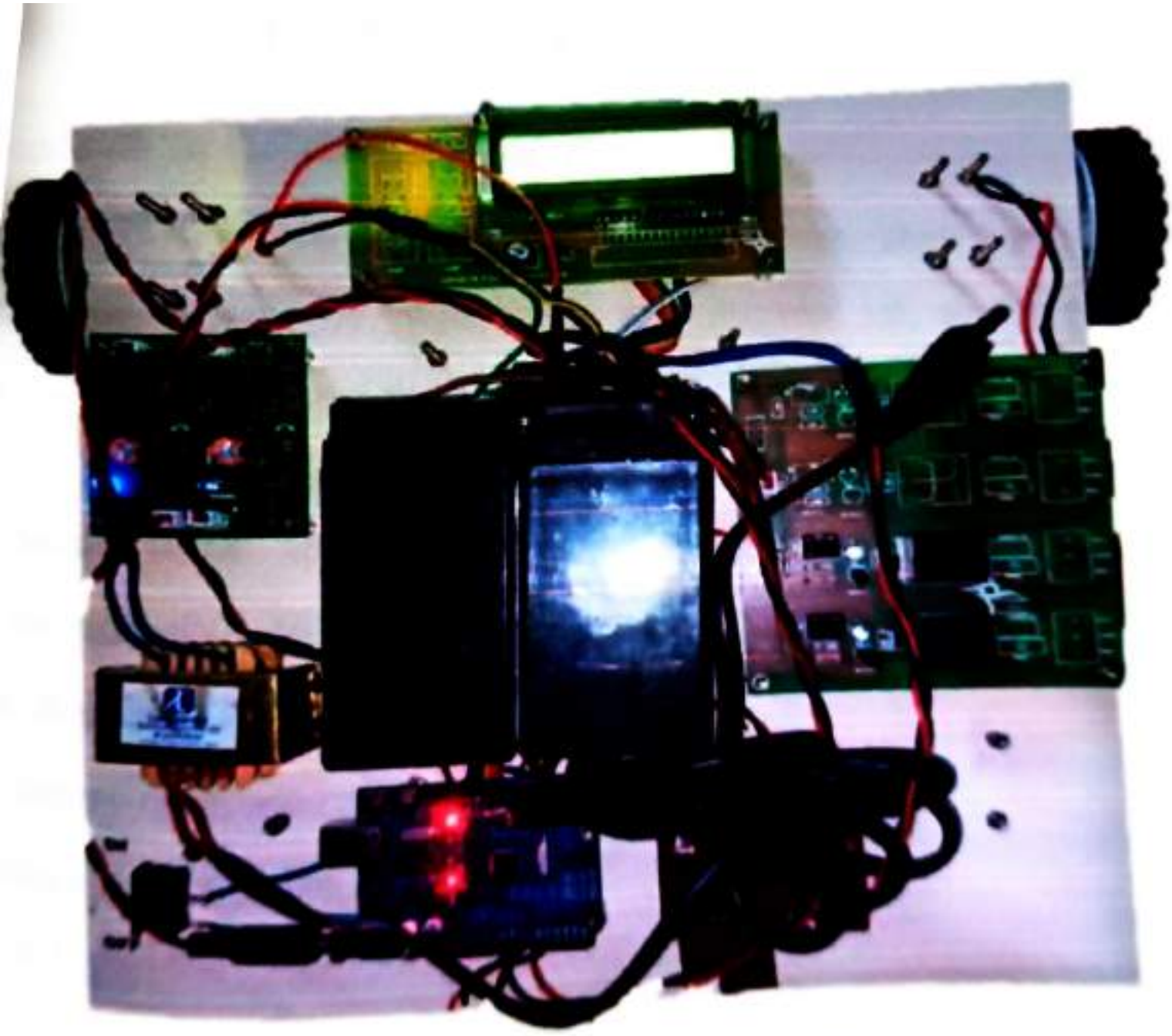

Fig. No. 8.2.1: Circuit Diagram

JCT COLLEGE OF ENGINEERING AND TECHNOLOGY

COIMBATORE

IOT BASED AUTOMATIC VEHICLE ACCIDENT ALERT SYSTEM

A PROJECT REPORT

Submitted by

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MAY -2024

ANNA UNIVERSITY: CHENNAI 600 025

BONAFIDE CERTIFICATE

Certified that this project report **"IOT BASED AUTOMATIC VEHICLE ACCIDENT ALERT SYSTEM"** is the Bonafede work of **"JAYAPRAKASH.A, SARAVANAN.B, SIJIL JHONSON.K, AMARNATH.M"** who carried out the project work under my supervision.

SIGNATURE

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INTERNAL EXAMINER

EXTERNAL EXAMINER

ABSTRACT

The IoT-based Accident Alert and Rescue System presented in this paper integrates Arduino microcontrollers with a variety of sensors including vibration, alcohol, ultrasonic, and GPS, along with motor and relay modules, all controlled by an IoT Node MCU. This system aims to enhance emergency response capabilities by detecting potential accidents such as collisions or alcohol impairment in vehicles. In the event of an accident, the system triggers an alert through the IoT platform, providing real-time location information to emergency services. Furthermore, it can remotely activate rescue mechanisms via motor-driven actuators, enabling swift and coordinated responses to mitigate the impact of accidents and save lives The IoT-based Automatic Vehicle Accident Alert System is designed to enhance road safety by promptly notifying emergency services and designated contacts in the event of a vehicular accident. Leveraging Internet of Things (IoT) technology, this system integrates various sensors and communication modules within vehicles to detect and analyze accidents in real-time. Upon detection of an accident, the system automatically triggers an alert, providing crucial information such as the location of the accident, severity of impact, and vehicle identification to emergency responders and pre-defined contacts. This proactive approach reduces response time, improves emergency assistance, and increases the chances of survival for accident victims. Additionally, the system facilitates post-accident analysis by storing and transmitting relevant data to authorities.

01	Literature review.	PO1,PO2,PSO1,PSO2
02	Problem Identification.	PO1,PO2,PO3,PO4,PO6,PSO1,PSO2
03	Modern Tools Usage.	PO5,PO12,PSO2
04	To prepare Project Report.	PO8,PO9
05	Project Reviews to be attended.	PO9,PO10,PSO2

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COURSE: PROJECT WOKK	SEMESTER VIII CREDITS: 10
COURSE CODE: EE8811 REGULATION: 2017	COURSE TYPE : LABORATORY (CORE)
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720920105301	AMARNATH M		

ABSTRACT:

UNIT	DETAILS	TOTAL HOURS
PROJECT TITLE	**IoT BASED AUOMATIC VEHICLE ACCIDENT ALERT SYSTEM**	300
PROJECT ABSTRACT	The IoT-based Automatic Vehicle Accident Alert System instantly notifies emergency services and designated contacts post-accident by embedding sensors and communication modules within vehicles. This system automatically relays vital information such as accident location and severity, enhancing response times and survival chances for victims.	
PROJECT CONCLUSION	The IoT-based accident alert system offers low-cost, portable, and compact design, integrating accelerometer sensors, GPS, and IoT for enhanced accident detection and location tracking. It significantly reduces response time, facilitating immediate treatment and saving lives, particularly in remote or nighttime accidents.	

APPENDIX

APPENDICES – II

HARDWARE SETUP

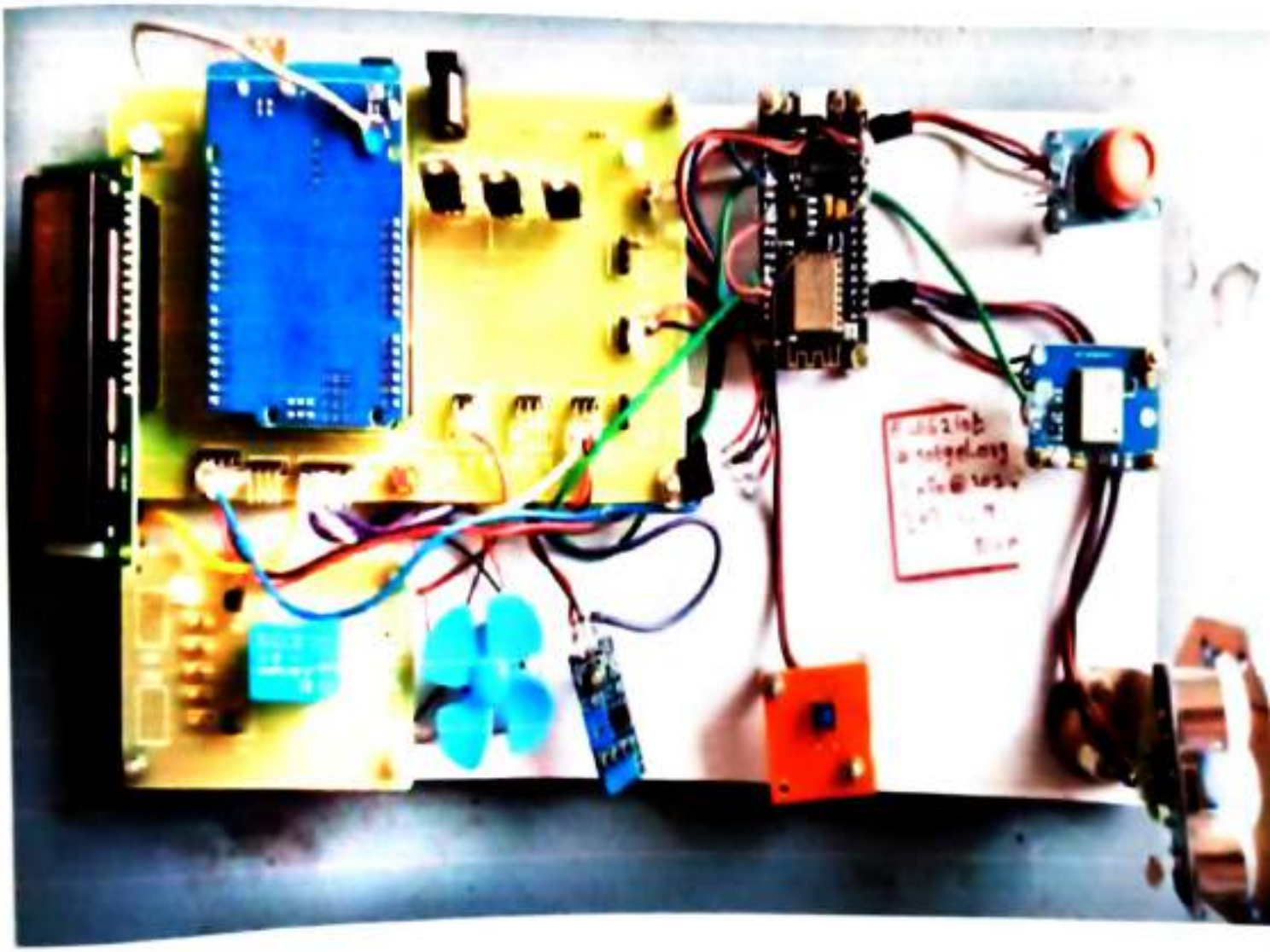

FIG.NO:9.1 HARDWARE SETUP

JCT College of Engineering & Technology
Coimbatore.

WRIST BAND FOR BLIND WITH MOTION SENSOR

PROJECT REPORT

Submitted by

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MAY 2024

ANNA UNIVERSITY : CHENNAI 600 025

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Certified that this project report " **WRIST BAND FOR BLIND WITH MOTION SENSOR** " is the bonafide work of "**MRIDHUL RAJU, DIKUL , HARIKRISHAN T ,RESHMA G** " who carried out the project work under my supervision

SIGNATURE
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External Examiner

ABSTRACT

Wristbands for visually impaired people are wearable devices that use various technologies, such as audio and haptic feedback, GPS, and smartphone connectivity, to help people who are blind or visually impaired navigate their environment and stay connected to the world around them. In addition to these core features, some wristbands for visually impaired people may offer additional functionality, such as the ability to monitor health and fitness data or control household appliances. Overall, wristbands for visually impaired people can be a valuable tool for helping people with visual impairments stay connected and independent.

Accessibility is a key factor in any of the system that we develop and to revolutionise it. In these smart bands or the wrist bands to help out various visually impaired persons many technologies can be used. Various of them exist in the market too. All of them generally gets higher positive responses. And apparently many of the users are satisfied with the better, accurate and flexible performances of the product. We were able to generate an combined model of two systems in a combined manner. Object detection using an ultrasonic sensor is the first part and other is a high end technology of the motion detection for the persons who wear it. Our prototype worked well in overall in indoor conditions and it is successful in many of the instances.

01	Literature review.	PO1,PO2,PSO1,PSO2
02	Problem Identification.	PO1,PO2,PO3,PO4,PO6,PSO1,PSO2
03	Modern Tools Usage.	PO5,PO12,PSO2
04	To prepare Project Report.	PO8,PO9
05	Project Reviews to be attended.	PO9,PO10,PSO2

JCT

JCT COLLEGE OF ENGINEERING AND TECHNOLOGY

Pichanur, Coimbatore – 641105

Department of Electrical & Electronics Engineering

ABSTRACT VS POs MAPPING

PROGRAM: ELECTRICAL AND ELECTRONICS ENGINEERING	DEGREE : B. E
COURSE: PROJECT WORK	SEMESTER : VIII CREDITS: 10
COURSE CODE: EE8811 REGULATION: 2017	COURSE TYPE : LABORATORY (CORE)
COURSE AREA/DOMAIN: ELECTRICAL	CONTACT HOURS : 300 Hrs / sem

STUDENTS REGISTER NUMBER	NAME OF THE STUDENTS	SUPERVISOR NAME	BATCH NUMBER
720920105011	MRIDHUL RAJU	Ms.P.AROKIA MARY CAROLINE	5
720920105305	DIKUL		
720920105308	HARIKRISHNAN T		
720920105310	RESHMA G		

ABSTRACT:

UNIT	DETAILS	TOTAL HOURS
PROJECT TITLE	WRIST BAND FOR BLIND WITH MOTION SENSOR	300
PROJECT ABSTRACT	Empowering visually impaired individuals with advanced wristbands, merging tech for better navigation and connectivity. Developing innovative solutions like wristbands for visually impaired individuals combines various technologies, such as audio feedback, GPS, and health monitoring, to enhance independence and connectivity. Integrating object detection and motion sensing in prototypes can significantly improve indoor navigation, ensuring better accuracy and performance. Continued advancements in these areas hold immense potential for revolutionizing accessibility and improving the lives of visually impaired individuals.	
PROJECT CONCLUSION	We recognized the need for independence and safety among visually impaired individuals in our busy world. This led us to develop a successful wristband-based system that detects objects and sends alerts in dangerous situations. Our design prioritizes reliability and usability, integrating motion and object detection seamlessly. With essential components like motion sensors, GPS, and ultrasonic sensors, we aim to empower visually impaired individuals to navigate their environments confidently and independently.	

JOURNAL / WEB / TEXT / REFERENCE BOOKS:

S.NO.	TITLE OF JOURNAL,BOOK/AUTHORS PUBLICATION
01	V. Aarthi, C. Sangeethaa Sre, G. Swarnamalya Arasi, M.Sumi Delfina, M. Tharan Kumar; Smart Alert and Intimation System for Vip (Visually Impaired Person), IEEE Xplore Part Number: CFP21K25-ART, 2021
02	Wafa Elmannai and Khaled Elleithy; Sensor-Based Assistive Devices for Visually-Impaired People: Current Status, Challenges, and Future Directions, MDPI, 2018
03	Erick Javier Argüello Prada and Lina Maria Santacruz Forero, A belt-like assistive device for visually impaired people: Toward a more collaborative approach, Cogent Engineering, 2022
04	Dhiraj Sunehra, V. Sai Sreshta, V. Shashank, B. Uday Kumar Goud, Raspberry Pi Based Smart Wearable Device for Women Safety using GPS and GSM Technology, IEEE, 2020

Fig 11 : Hardware Images of Obstacle Detection

JCT College of Engineering & Technology
Coimbatore.

SPEED CONTROL OF ELECTRIC CARS BY USING IoT

PROJECT REPORT

Submitted by

VISHNU B (720920105021)
AYYAPPADAS K M (720920105304)
FUHAD K (720920105306)
M SRIKANTH (720920105311)

In partial fulfillment for the award of the degree of

BACHELOR OF ENGINEERING
IN

ELECTRICAL AND ELECTRONICS ENGINEERING

JCT COLLEGE OF ENGINEERING AND TECHNOLOGY

ANNA UNIVERSITY : CHENNAI 600 025

MAY 2024

SPEED CONTROL OF ELECTRIC CARS BY USING IoT

PROJECT REPORT

Submitted by

VISHNU B (720920105021)

AYYAPPADAS K M (720920105304)

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ANNA UNIVERSITY : CHENNAI 600 025

MAY 2024

JCT

JCT COLLEGE OF ENGINEERING AND TECHNOLOGYPICHANUR, COIMBATORE-641105

ANNA UNIVERSITY : CHENNAI 600 025

BONAFIDE CERTIFICATE

Certified that this project report **"SPEED CONTROL OF ELECTRIC CARS BY USING IoT"** is the bonafide work of **"VISHNU B, AYYAPPADAS K M, FUHAD K, M SRIKANTH"** who carried out the project work under my supervision.

SIGNATURE
Dr.K. GEETHA, PROFESSOR &
HEAD OF THE DEPARTMENT
Electrical and Electronics Engineering
JCT College of Engineering and Technology
Pichanur, Coimbatore

SIGNATURE
Ms. SHANTHI M
SUPERVISOR & ASSISTANT PROFESSOR
Electrical and Electronics Engineering
JCT College of Engineering and Technology
Pichanur , Coimbatore

Submitted for the project viva-voce Examination held at JCT college of Engineering and Technology on .....13/05/2024.....

Internal Examiner

External Examiner

ABSTRACT

With the increasing popularity of electric vehicles (EVs), efficient speed control becomes imperative for ensuring safety, optimizing energy consumption, and enhancing overall performance. Traditional speed control systems often lack adaptability and real-time responsiveness, leading to suboptimal driving experiences. As electric vehicles (EVs) gain increasing traction, optimizing speed control becomes paramount for ensuring safety, maximizing energy efficiency, and enhancing overall driving experiences. Traditional speed control systems often lack the adaptability and real-time responsiveness required for dynamic driving conditions, leading to suboptimal performance. The proposed IoT-enabled speed control system addresses these shortcomings by leveraging a network of sensors, actuators, and communication modules to gather real-time data from various sources including the vehicle's surroundings, internal components, and driver inputs. Furthermore, the system incorporates predictive analytics to anticipate future scenarios and proactively adjust speed settings for smoother driving experiences and heightened safety. By offering a comprehensive solutionto enhance the performance, safety, and efficiency of electric cars, the proposed IoT-based speed control system aims to propel the widespread adoption of sustainable transportation technologies in the contemporary landscape. Traditional speed control systems often fall short in dynamically adapting to changing driving conditions, leading to suboptimal performance. To address this challenge, our proposed IoT-based speed control system introduces a ground-breaking approach. Moreover, our system incorporates predictive analytics capabilities, enabling it to anticipate future scenarios and pre-emptively adjust speed settings for smoother driving experiences and heightened safety.

Subjects: Software Development, Sensor Technology, Wireless Communication, Safety and Regulations.

Keywords: Adaptive control, electronic assistive system, Internet of things, Electric vehicles.

01	Literature review.	PO1,PO2,PSO1,PSO2
02	Problem Identification.	PO1,PO2,PO3,PO4,PO6,PSO1,PSO2
03	Modern Tools Usage.	PO5,PO12,PSO2
04	To prepare Project Report.	PO8,PO9
05	Project Reviews to be attended.	PO9,PO10,PSO2

ICT

JCT COLLEGE OF ENGINEERING AND TECHNOLOGY

Pichanur, Coimbatore – 641105

Department of Electrical & Electronics Engineering

ABSTRACT VS POs MAPPING

PROGRAM: ELECTRICAL AND ELECTRONICS ENGINEERING	DEGREE : B. E
COURSE: PROJECT WORK	SEMESTER : VIII CREDITS: 10
COURSE CODE: EE8811 REGULATION: 2017	COURSE TYPE : LABORATORY (CORE)
COURSE AREA/DOMAIN: ELECTRICAL	CONTACT HOURS : 300 Hrs / sem

STUDENTS REGISTER NUMBER	NAME OF THE STUDENTS	SUPERVISOR NAME	BATCH NUMBER
720920105021	VISHNU B	Ms. SHANTHI M	VI
720920105304	AYYAPPADAS K M		
720920105306	FUHAD K		
720920105311	M SRIKANTH		

ABSTRACT:

UNIT	DETAILS	TOTAL HOURS
PROJECT TITLE	SPEED CONTROL OF ELECTRIC CARS BY USING IoT	300
PROJECT ABSTRACT	With the rise of electric vehicles (EVs), optimizing speed control is crucial for safety and efficiency. Traditional systems lack adaptability. Our IoT-based system gathers real-time data and uses predictive analytics to adjust speed settings proactively, ensuring smoother driving and heightened safety for EVs. Additionally, the system integrates predictive analytics to anticipate future scenarios and proactively adjust speed settings for smoother driving experiences and enhanced safety. By offering a comprehensive solution to improve the performance, safety, and efficiency of electric vehicles, our proposed IoT-based speed control system aims to accelerate the adoption of sustainable transportation technologies in today's landscape.	
PROJECT CONCLUSION	The speed control system using Blynk IoT and the ESP8266 module is a significant advancement in remote vehicle control. It offers remote adjustability and real-time monitoring, though it faces challenges like WiFi dependence and potential latency issues. This project offers remote control flexibility, real-time monitoring, and accessibility, catering to a broad audience. However, challenges like WiFi dependency and latency issues require consideration. Nevertheless, its integration with Blynk IoT hints at future innovation and improved interoperability with other IoT devices, promising enhanced efficiency and safety in electric vehicle operation.	

CHAPTER 4

HARDWARE AND RESULT ANALYSIS

The components were implemented and the working of the system is being analysed and ready for in initialisation

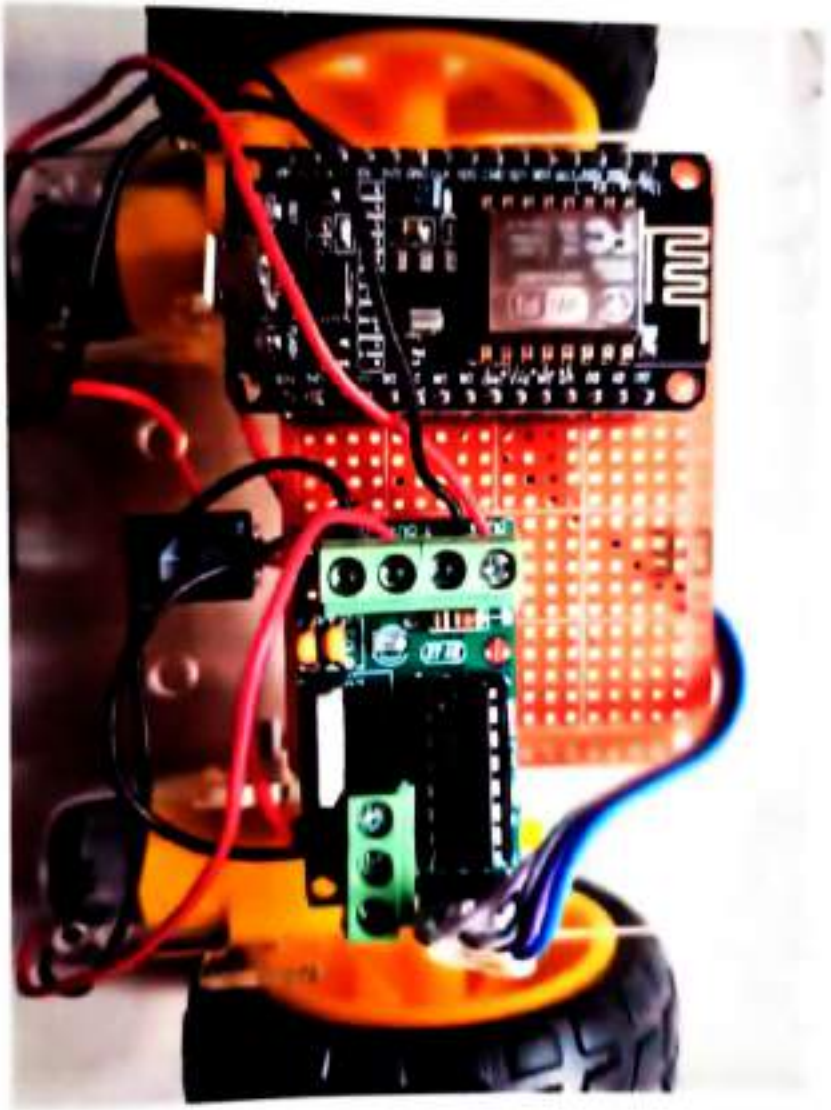

Figure 11: Implementation of Prototype

The ESP8266's GPIO pins connected to the L293D's control pins. These GPIO pins will be used to send control signals to the motor driver to control the direction and speed of the motor

WATER QUALITY MONITORING USING IOT

PROJECT REPORT

Submitted by

ASHIQ S	**(720920105302)**
GUDIPATI MANASA	**(720920105312)**
ANUMALA VENKATA SANTHOSH	**(720920105313)**

in partial fulfillment for the award of the degree of

BACHELOR OF ENGINEERING

in

ELECTRICAL AND ELECTRONICS ENGINEERING

JCT COLLEGE OF ENGINEERING AND TECHNOLOGY

COIMBATORE 641105

ANNA UNIVERSITY : CHENNAI 600 025

MAY 2024

ANNA UNIVERSITY : CHENNAI 600 025

BONAFIDE CERTIFICATE

Certified that this project report " **WATER QUALITY MONITORING USING IOT"** is the bonafide work of " **ASHIQ S, GUDIPATI MANASA, ANUMALA VENKATA SANTHOSH"** who carried out the project work under my supervision.

SIGNATURE

Dr.K.GEETHA

PROFESSOR

HEAD OF THE DEPARTMENT

Electrical and Electronics Engineering

JCT College of Engineering and Technology

Pichanur , Coimbatore

SIGNATURE

R.SATHEESH

SUPERVISOR

ASSISTANT PROFESSOR

Electrical and Electronics Engineering

JCT College of Engineering and Technology

Pichanur , Coimbatore

Submitted for the project viva-voce Examination held on .....13/05/2024.....

INTERNAL EXAMINER

EXTERNAL EXAMINER

ABSTRACT

Pollution of water is one of the main threats in recent times as drinking water is getting contaminated and polluted. The polluted water can cause various diseases to humans and animals, which in turn affects the life cycle of the ecosystem. If water pollution is detected in an early stage, suitable measures can be taken and critical situations can be avoided. To make certain the supply of pure water, the quality of the water should be examined in real-time. Smart solutions for monitoring of water pollution are getting more and more significant these days with innovation in sensors, communication, and Internet of Things (IoT) technology. In this project, a detailed review of the latest works that were implemented in the arena of smart water pollution monitoring systems is presented. The project proposes a cost effective and efficient IoT based smart water quality monitoring system which monitors the quality parameters uninterruptedly. The developed model is tested with three water samples and the parameters are transmitted to the cloud server for further action.

To ensure the safe supply of drinking water the quality should be monitored in real time for that purpose of new approach IOT (Internet of Things) based water quality monitoring has been proposed. In this project, the design of IOT based water quality monitoring system that monitor the quality of water in real time. This system consists some sensors which measure the water quality parameter such as pH, turbidity, TDS, water flow, temperature. The measured values from the sensors are processed by microcontroller and this processed values are transmitted remotely to the core controller that is Arduino IDE by using Wi-Fi module. Finally, sensors can view data on internet browser application using IoT technology.

JCT

JCT COLLEGE OF ENGINEERING AND TECHNOLOGY

Pichanur Coimbatore – 641105

Department of Electrical & Electronics Engineering

ABSTRACT VS POs MAPPING

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COURSE: PROJECT WORK	SEMESTER: VIII CREDITS: 10
COURSE CODE: EE8811 REGULATION: 2017	COURSE TYPE: LABORATORY (CORE)
COURSE AREA/DOMAIN: ELECTRICAL	CONTACT HOURS: 300 Hrs / sem

STUDENTS REGISTER NUMBER	NAME OF THE STUDENTS	SUPERVISOR NAME	BATCH NUMBER
720920105302	ASHIQ S	R. SATHEESH, M.E.,Ph.D.,	07
720920105312	GUDIPATI MANASA		
720920105313	ANUMALA VENKATA SANTHOSH		

ABSTRACT:

UNIT	DETAILS	TOTAL HOURS
PROJECT TITLE	water quality monitoring using iot	300
PROJECT ABSTRACT	In this project the design of IoT based water quality monitoring system was proposed that monitor the quality o water in real time.	
PROJECT CONCLUSION	By using this project, the feasibility and effectiveness of utilizing IoT devices to continuously monitor various parameters of water quality in real-time.	

APPENDICES 2

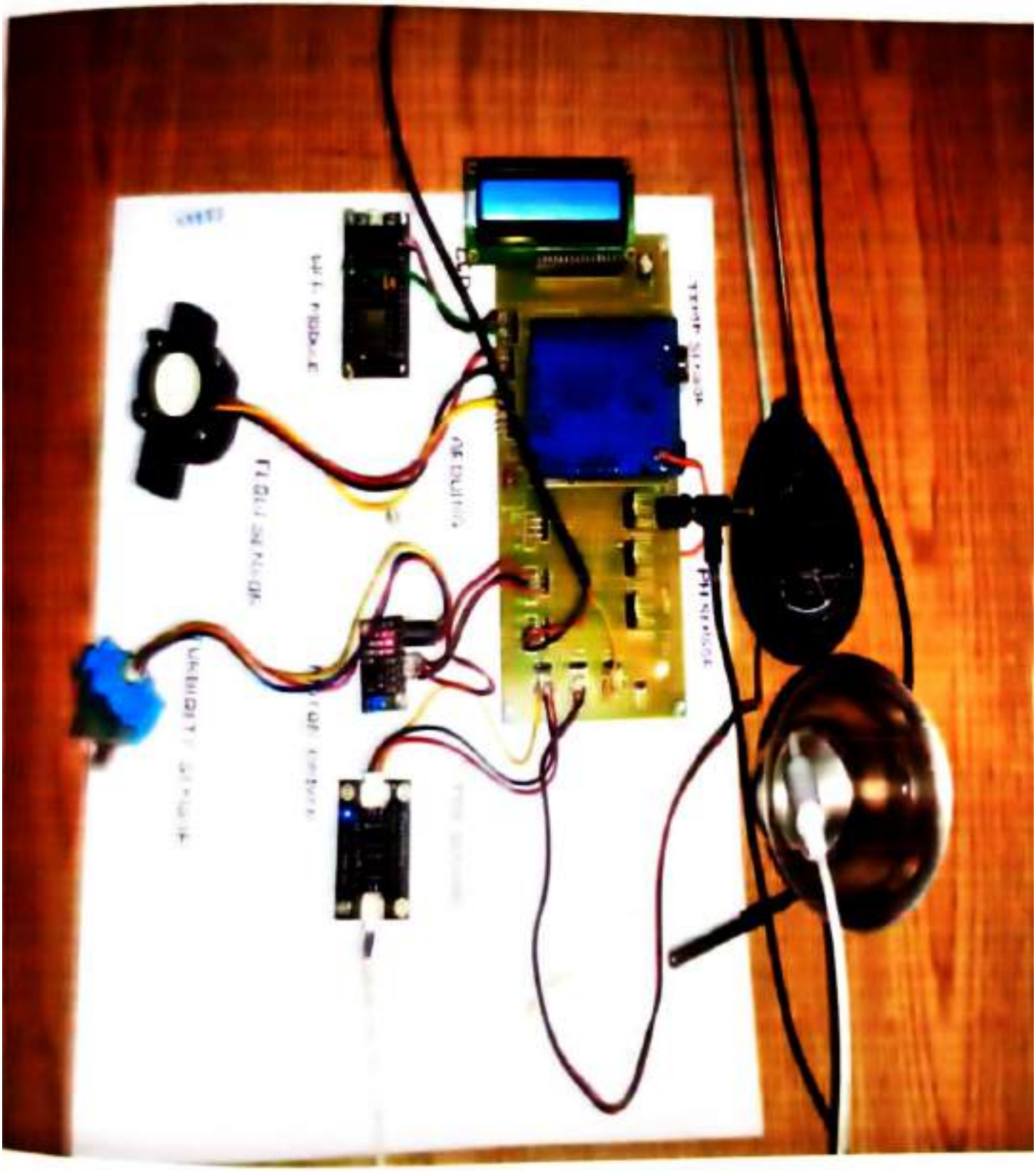

Fig.15:Hardware setup

FOOD TECHNOLOGY

JCT

JCT COLLEGE OF ENGINEERING AND TECHNOLOGY
PICHANUR, COIMBATORE – 641105
(An Autonomous Institution)

Internship Students List- Food Technology-(2023-24)

Sl. No.	Title of the collaborative activity	Name of the collaborating agency with contact details	Name of the participant	Year of Collaboration	Duration
1	Internship	Tamil Nadu co-operative milk producers federation limited	ALBERT T VARGHESE	2023-24	08.07.2023 to 22.07.2023
2	Internship	Tamil Nadu co-operative milk producers federation limited	ANNA SHIBU	2023-24	08.07.2023 to 22.07.2023
3	Internship	Tamil Nadu co-operative milk producers federation limited	ANSIYA P A	2023-24	08.07.2023 to 22.07.2023
4	Internship	Tamil Nadu co-operative milk producers federation limited	FARHANA A	2023-24	08.07.2023 to 22.07.2023
5	Internship	Tamil Nadu co-operative milk producers federation limited	SREEKUTTAN K R	2023-24	08.07.2023 to 22.07.2023
6	Internship	Tamil Nadu co-operative milk producers federation limited	NAJA BEEGAM M N	2023-24	08.07.2023 to 22.07.2023
7	Internship	Tamil Nadu co-operative milk producers federation limited	SHAHANA S	2023-24	08.07.2023 to 22.07.2023
8	Internship	Tamil Nadu co-operative milk producers federation limited	CHANDRU S	2023-24	05.07.2023 to 04.08.2023
9	Internship	Peter's Foods PVT LTD	NEGHA V MANI	2023-24	10.07.2023 to 26.07.2023
10	Internship	Sri Shakthi Food Testing Laboratory	AJMUL KAJA HUSSAIN	2023-24	15.05.2024 to 29.05.2024

11	Internship	Cheena Vala Restaurant Edapally	SRUTHY ANTONY	2023-24	08.07.2023 to 22.07.2023
12	Internship	Daily Bread Pastry Corner Bakery and Cake Shop	LIBIYA L	2023-24	15.05.2024 01.06.2024

HOD/FT

aavin

TAMILNADU CO-OPERATIVE MILK PRODUCERS' FEDERATION LIMITED.

Joint Managing Director's Office

29 A [illegible] Ambattur, Chennai - 600 053

This is to certify that ALBERT T VARGHESE B.Tech Food Technology student of JCT College of Enginerring and Technlogy, Pichanur, Coimbatore had undergone Internship Training in Tamilnadu Cooperative Milk Producer's Federation Limited at Madhavaram Dairy, Chennai – 600051 from 08 July 2023 to 22 July 2023 and completed the same successfully.

23/8/22

DGM(QC)/HRD

aavin TAMILNADU CO-OPERATIVE MILK PRODUCERS FEDERATION LIMITED,

Joint Managing Director's Office

[illegible]

This is to certify that ANNA SHIBU B.Tech Food Technology student of JCT College of Enginerring and Technlogy, Pichanur, Coimbatore had undergone Internship Training in Tamilnadu Cooperative Milk Producer's Federation Limited at Madhavaram Dairy, Chennai – 600051 from 08 July 2023 to 22 July 2023 and completed the same successfully.

DGM(QC)/HRD 23/7/22

aavin

TAMILNADU CO-OPERATIVE MILK PRODUCERS FEDERATION LIMITED,

Joint Managing Director's Office,

[illegible] Industrial Estate, Ambattur, Chennai - 600 053.

This is to certify that ANSIYA P A B.Tech Food Technology student of JCT College of Enginerring and Technlogy, Pichanur, Coimbatore had undergone Internship Training in Tamilnadu Cooperative Milk Producer's Federation Limited at Madhavaram Dairy, Chennai – 600051 from 08 July 2023 to 22 July 2023 and completed the same successfully.

23/8/22

DGM(QC)/HRD

aavin

TAMILNADU CO-OPERATIVE MILK PRODUCERS FEDERATION LIMITED.

Joint Managing Director's Office

This is to certify that FARHANA A B.Tech Food Technology student of JCT College of Enginerring and Technlogy, Pichanur, Coimbatore had undergone Internship Training in Tamilnadu Cooperative Milk Producer's Federation Limited at Madhavaram Dairy, Chennai – 600051 from 08 July 2023 to 22 July 2023 and completed the same successfully.

DGM(QC)/HRD 23/8/22

aavin

TAMILNADU CO-OPERATIVE MILK PRODUCERS FEDERATION LIMITED

Joint Managing Director's Office

29, A, Industrial Estate, Arumbakkam, Chennai - 600 106

This is to certify that SREEKUTTAN K R B.Tech Food Technology student of JCT College of Enginerring and Technlogy, Pichanur, Coimbatore had undergone Internship Training in Tamilnadu Cooperative Milk Producer's Federation Limited at Madhavaram Dairy, Chennai – 600051 from 08 July 2023 to 22 July 2023 and completed the same successfully.

DGM(QC)/HRD 23/8/22

TAMILNADU CO-OPERATIVE MILK PRODUCERS' FEDERATION LIMITED.
Joint Managing Director's Office
29 & 30 Industrial Estate, Ambattur, Chennai - 600 098.

This is to certify that NAJA BEEGAM M N B.Tech Food Technology student of JCT College of Enginerring and Technlogy, Pichanur, Coimbatore had undergone Internship Training in Tamilnadu Cooperative Milk Producer's Federation Limited at Madhavaram Dairy, Chennai – 600051 from 08 July 2023 to 22 July 2023 and completed the same successfully.

DGM(QC)/HRD 23/8/23

aavin

TAMILNADU CO-OPERATIVE MILK PRODUCERS FEDERATION LIMITED,

Joint Managing Director's Office

This is to certify that SHAHANA S B.Tech Food Technology student of JCT College of Enginerring and Technlogy, Pichanur, Coimbatore had undergone Internship Training in Tamilnadu Cooperative Milk Producer's Federation Limited at Madhavaram Dairy, Chennai – 600051 from 08 July 2023 to 22 July 2023 and completed the same successfully.

DGM(QC)/HRD 23/8/22

TAMILNADU COOPERATIVE MILK PRODUCERS FEDERATION LIMITED
SHOLINGANALLUR DAIRY: CHENNAI 600119.

Ref. No: 3/QC LAB/SNR/2023 04.08.2023

TO

THE JOINT MANAGING DIRECTOR,
T.C.M.P.F.LTD, AMBATTUR,
CHENNAI: 6000098.

Respected Sir/Madam

Sub: TCMPF Ltd – Sholinganallur Dairy Training
Attendance – Reg.
Ref: 1277/HRD/2021 Dated: 05.07.2023

****

CHANDRU. S, B-TECH (FOOD Technology) student of JCT College OF Engineering and Technology COIMBATORE, TAMILNADU, PICHANUR-641105 has undergone Internship Training satisfactorily at Sholinganallur Dairy from 05.07.2023 to 04.08.2023.

4/8/23

Assistant General Manager (QC)
Sholinganallur Dairy.

PETER'S

Fibre Rich Red Rice

27-07-2023

CERTIFICATE

This is certify that **MS. NEGA V MANI** (Register No:720921218041), B.Tech Food Technology student **of** JCT COLLEGE OF ENGINEERING AND TECHNOLOGY ,PICHANUR,COIMBATORE has completed her internship at PETER'S FOODS PVT LTD from **10th July** to **26th July 2023.**

We wish her all the best in future endeavors

For PETERS FOODS PVT LTD

MANAGER

For Peter's Foods Pvt Ltd

Peter's Foods (P) Ltd Industrial Estate Angamaly South Post Ernakulam District Kerala India 683 573
Ph: 0484-2456928 Mob: 9847629219

SRI SHAKTHI
FOOD TESTING LABORATORY

Sponsored by : Ministry of Food Processing Industries, Government of India.
43-B, Mettupalayam Road, Vellakinar Pirivu, Thudiyalur, Coimbatore - 641 034.
Mob : 72220 96666, 89030 26999, E-mail : srishakthiftl@gmail.com

Certificate

This is to certify that AJMUL KAJA HUSSAIN. A

studying / ~~working~~ as III year B.Tech Food Technology

in JCT College of Engineering And Technology

has undergone a Hands on training on Food, Water & Soil Analysis both in chemical & Micro Lab

at Sri Shakthi Food Testing Laboratory, Thudiyalur, Coimbatore

for a period 15 days from 15.05.2024 to 29.05.2024

Managing Partner

website:www.foodtestinglab.in

THE FISHERMAN'S CATCH

Cheenavala

TO WHOM IT MAY CONCERN

This is to certify Ms. Sruthy Antony (Reg No: 720921218054) B.Tech Food Technology student of **JCT Collage of Engineering and Technology, pichanur Coimbatore** has successfully complete the internship at **Cheenavala Restaurant Edappally** From 08/07/2023 to 22/07/2023 (15 days).

During the internship she has worked under the maintenance and quality of seafood management and cold storage monitoring

EX.Chef

Rahul Krishna

RASAYANTRA FOODS PVT. LTD. PIN 683 572 ANGAMALY

Date : 23/07/2023

place :

A RASAYANTRA FOODS PVT LTD INITIATIVE

DAILY BREAD PASTRY CORNER BACKERY AND CAKE SHOP

VILPATTI KODAIKANAL

KODAIKANAL – 624 101

DATE : 30.05.2024

TO WHOM SO EVER IT MAY CONCERN.

This is to certify that L. Libiya Lawrence (Reg.No. 720921218032) doing B.Tech (FOOD TECHNOLOY) in JCT College of Engineering and Technology, Coimbatore has undergone Internship Training for the period from 15 .05. 2024 to 01.06.2024 in our organization. We found her conduct is good during the tenure.

For DAILY BREAD

Proprietor (31/5/24)

The General Manager(pastry corner)

JCT

JCT COLLEGE OF ENGINEERING AND TECHNOLOGY
PICHANUR, COIMBATORE – 641105
(An Autonomous Institution)

NAAC A

Department of Food Technology
Academic year 23-24
List of students undergone projects and their details

S.NO	NAME OF THE STUDENT	TITLE OF THE PROJECT	GUIDE NAME
1	NIDA FATHIMA A M	Physico- Chemical Characteristics of dried jackfruit segments pretreated with various humectants	Ms. Indu S
2	AHALYA D	NUTRITIONAL ANALYSIS OF CODED HERB 'M O P' granules- A health supplement	Ms. Indu S
3	AISWARYA R		
4	ARSHIDHA P S		
5	BI ESIA BABU		
6	FATHIMATHU SWALIHA K A		
7	HARIPRASAD P S	Formulation and evaluation of herbal gummy from veld grape to treat osteoporosis	Dr. Balamurugan P
8	RAGHUL C RAMAKRISHNAN		
9	SHAHANAS		
10	MUHAMMED NIHAL	The utilization of pistachio shel to produce biodegradable packaging film	Dr. Balamurugan P
11	MOHAMMED SAHAD V P		
12	SAFAR ALI		
13	ANEENA ANTONY C	Development of fruit and vegetable based texture modified food products and its quality evaluation	Ms. Indu S
14	II SHRIN SEI FIKA		
15	PRASIKA S		
16	ROSHINI DEEPAN K		
17	ASHIQUE SAKKER	Calcium fortification of almond based rice flour	Ms. Priyanga J
18	MUHAMMED SAFVAN V P		
19	MUHAMMED SHASIL N S		
20	MOHSIN T V		
21	ALWIN IGNATIUS T		Ms. Priyanga J

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PICHANUR, COIMBATORE – 641105
(An Autonomous Institution)

NAAC A

22	ARJUN ASHOK	Valorization of coconut haustorium, A value added ingredient in a cashew- based baked dessert	
23	DHIYOOF YUSRIN P		
24	JITHIN JASIN		
25	HIBA PARVEEN K S	Comparative analysis of fumigant toxicity of phytochemical extracts of spice wastes with spice essential oils	Ms. Priyanga J
26	THEJAS S		
27	JUMANA HAZEEN M A	Incorporation of coconut in curd for flavoured product development	Mr. D. Alwin Johnnie
28	ABHINAV SOMAN	Nutritive fish pickle from frigate tuna	Ms. Indu S
29	SHIHANA H		
30	SHILPA K		
31	KISHORE P	Formulation and development of cajun flavoured burger patty	Dr. M. Indumathi
32	SURYA NARAYANAN S		
33	ISHWARYARAI R	Development of guava flavoured whey drink	Dr. M. Indumathi
34	SANTHA MOORTHY S		
35	VARSHA D		
36	NAVANITHA M	Mango Maven: Crafting an economical mango beverage with comprehensive qualitative evaluation	Ms. Indu S
37	AARDRA S		
38	BALAJI M	Development of tomato flavoured instant flattened rice mix	Dr. M. Indumathi
39	MANIVASU V		
40	PRAVEEN A		
41	PRAVEEN S		
42	SATHIYASEELAN M		
43	SANDHIYA V	Development of pumpkin pudding using goat milk	Ms. Indu S
44	HARINI M J		
45	SANJAY KUMAR S		
46	NITHISHKUMAR P		
47	DINESH K		

HOD/FT

PHYSICO-CHEMICAL CHARACTERISTICS OF DRIED JACKFRUIT SEGMENTS PRETREATED WITH VARIOUS HUMECTANTS

A PROJECT REPORT

Submitted by

NIDA FATHIMA A M ***(720920218032)***

In partial fulfilment for the award of degree

of

BACHELOR OF TECHNOLOGY

IN

FOOD TECHNOLOGY

JCT COLLEGE OF ENGINEERING AND TECHNOLOGY,

PICHANUR, COIMBATORE

ANNA UNIVERSITY: CHENNAI 600025

MAY 2024

ANNA UNIVERSITY: CHENNAI 600 025

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Certified that this project report "**PHYSICOCHEMICAL CHARACTERISTICS OF DRIED JACKFRUIT SEGMENTS PRETREATED WITH VARIOUS HUMECTANTS**" is the bonafide work of "**NIDA FATHIMA A M (720920218032)**" who carried out the project work under my supervision.

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INTERNAL EXAMINER

11/5/24

EXTERNAL EXAMINER

ABSTRACT

The project aimed to evaluate the optimization of process conditions for the preparation of dried jackfruit segments using various humectants and quality evaluation (physicochemical) of dried jackfruit segments during storage.

Dried jackfruits helps to improve better quality shelflife due to less microorganisms.

Jackfruit bulb is considered an edible part, have been shown to contain substantial levels of vitamins, minerals, phytochemicals, carbs, and proteins. The present study set out to determine how drying techniques affected the physicochemical characteristics of jackfruit bulbs pretreated with various humectants such as sugar, sugar-glucose, sugar-glucose-jaggery and jaggery. The investigation examined the effects of nutritional, physico-chemical, and physical qualities following drying using drying technique: Hot air oven. The bulb's phytochemical composition and antioxidant characteristics were examined using a spectrophotometer and the DPPH technique, respectively.

According to this study, dried jackfruit bulbs have good antioxidant properties along with high concentrations of protein, crude fiber, carbs, and phytochemicals. The dried bulb is a good complement to a low-fat diet because of its extremely low fat level. Additionally, the dried bulbs from the FD retained rather significant levels of carotenoids, phenolics, and ascorbic acid.

Keywords: Artocarpus heterophyllus lam, physico-chemical properties, shelf life, colour, dehydration.

NUTRITIONAL ANALYSIS OF CODED HERB 'MOP' GRANULES – A HEALTH SUPPPLEMENT

A PROJECT REPORT

Submitted by

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INTERNAL EXAMINER

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EXTERNAL EXAMINER

ABSTRACT

Moringa oleifera granules possess a high level of nutrition which is useful for humans. In this study an attempt was made to develop herbal formulation. The herbal granule formulation was developed from the *Moringa leaves and Mucuna pruriens* by granulation process. Application of natural herbs with a view to enhancing production performance and health status which create a well-balanced appealing product. This study was conducted with view to accessing the possible role of *Moringa oleifera* as a natural health supplement in human diet. Granulation is defined as a size enlargement process which converts fine or coarse particles into physically stronger and larger agglomerates having good flow property, better compression characteristics and uniformity. Nutritional profile of the product was created including estimation of Fat, Protein, Sodium, Total sugar, Carbohydrate, Total energy, Dietary Fiber and Cholesterol. Presence of these nutrients promotes immune system to enhance immunity and resist diseases. Decrease complications associated with heart disease, since the cholesterol is present in minimal amounts.

Keywords: *Moringa oleifera, Mucuna pruriens, health supplement.*

FORMULATION AND EVALUATION OF HERBAL GUMMY FROM VELD GRAPE (*Cissus quadrangularis*) TO TREAT OSTEOPOROSIS

A PROJECT REPORT

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INTERNAL EXAMINER

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ABSTRACT

The formulation and evaluation of Veld Grape (Cissus quadrangularis) herbal gummies for functional food applications involved the extraction of anti-inflammatory and antioxidant phytochemicals. A gelatinous matrix was meticulously optimized for taste, texture, and stability, with comprehensive assessments of physicochemical characteristics like hardness. Simplified methods such as colorimetry were employed for bioactive content analysis to ensure the preservation of essential compounds. Stability testing was meticulously conducted to determine the shelf life of these herbal gummies. The manufacturing process delicately integrated active compounds into the gelatinous matrix, yielding herbal gummies with harmonized taste, texture, and stability. Analytical methods like colorimetry spectroscopy were adeptly utilized for bioactive compound confirmation and retention. The inclusion of Veld Grape in these herbal gummies imparted potential health benefits, particularly for individuals concerned about osteoporosis, given its abundant content of calcium and other minerals crucial for bone health. Sensory evaluation unveiled remarkable consumer satisfaction with the product's aroma, appearance, taste, texture, and overall acceptability. Therefore the formulation of Veld Grape herbal gummies presented a promising option for functional food development. The incorporation of Veld Grape offered potential health benefits, while sensory evaluation indicates high consumer satisfaction.

THE UTILIZATION OF PISTACHIO SHELL TO PRODUCE BIODEGRADABLE PACKAGING FILM

A PROJECT REPORT

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ABSTRACT

Pistachio nut (Pistacia vera) shell waste, abundant from pistachio processing, was explored for activated charcoal production. Simultaneously addressing the global plastic waste crisis, a biodegradable plastic film was developed by blending pistachio nut shell charcoal with a synthetic biodegradable polymer (PVA). In India, waste statistics for 2022–23 revealed alarming figures, with 26,000 tonnes/day of plastic waste generated in 60 major cities. Only approximately 60% of this waste was recycled, predominantly comprising non-biodegradable petrochemical-based packaging materials. The proposed solution involved leveraging pistachio nut shell charcoal to create a biodegradable plastic film, presenting a sustainable alternative to traditional plastics. This study demonstrated the potential of utilizing pistachio nut shell waste for both environmental and industrial benefits. The biodegradable plastic film, incorporating pistachio nut shell charcoal and PVA, signified a promising step towards addressing plastic pollution while providing industries with sustainable and environmentally friendly alternatives.

DEVELOPMENT OF FRUIT AND VEGETABLE BASED TEXTURE MODIFIED FOOD PRODUCTS AND ITS QUALITY EVALUATION

A PROJECT REPORT

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ABSTRACT

The development of texture modified food products which is specifically tailored for elderly individuals who struggle with swallowing difficulties. The innovative approach of powdering the food items using a drum drier results in the production of convenient instant-use products in powder form. This method allows for easy consumption and digestibility for the elderly population, ensuring that they receive the necessary nutrients to maintain their health and well-being.

The products developed in this project include a variety of food items such as fruits, vegetables, dhal, and curd, all of which are essential for a balanced diet. By powdering these ingredients, the texture is modified to make them easier to swallow for individuals with swallowing problems and helps in preventing aspiration.

This approach not only enhances the accessibility of these foods for the elderly but also ensures that they receive the necessary nutrients without compromising on taste or quality.

Overall, the development of fruits and vegetable based texture modified food products for elderly individuals with swallowing difficulties showcases the innovative capabilities of the Food Technology department. By using a drum drier to powderize the ingredients, the project creates instant-use products that are both nutritious and easy to consume.

This initiative highlights the department's commitment to addressing the unique dietary needs of vulnerable populations, ultimately improving their quality of life and overall well-being.

CALCIUM FORTIFICATION OF ALMOND BASED RICE FLOUR

A PROJECT REPORT

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INTERNAL EXAMINER

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ABSTRACT

Rice flour is a widely used gluten-free alternative in many cuisines. However, it tends to have a low protein and mineral content compared to other flours. In this study, we investigate a strategy to fortify rice flour with ground almonds and calcium carbonate to improve its nutritional profile, especially in terms of protein and calcium content.

The addition of almonds to rice flour provides an increase in protein and healthy fats, contributing to a more balanced nutritional composition. Furthermore, calcium carbonate is incorporated to address the relatively low calcium levels commonly found in rice flour. The study explores the optimal ratios of almond and calcium carbonate additions that yield a fortified rice flour with enhanced nutritional benefits while maintaining desirable taste and texture characteristics.

We evaluate the physical and sensory properties of the fortified rice flour, focusing on factors such as consistency, flavor, and versatility in various culinary applications, including baking and cooking. A key objective is to ensure that the fortified flour retains the familiar characteristics of rice flour while offering additional health benefits.

Our results show that fortifying rice flour with almond and calcium carbonate leads to a significant increase in protein and calcium content. Sensory evaluations confirm that the fortified flour maintains a pleasant taste and texture, suggesting it can be used in a wide range of gluten-free recipes without compromising quality.

The study also examines consumer acceptance of the fortified rice flour through taste tests and surveys, providing insights into market potential and consumer preferences. Overall, the findings indicate that this approach to rice flour fortification offers a

promising solution for those seeking gluten-free products with improved nutritional value.

In conclusion, this study demonstrates the feasibility and benefits of fortifying rice flour with almond and calcium carbonate. This innovation has potential applications in gluten-tree food products, offering a nutritionally enriched alternative to traditional rice flour. Future research could explore further enhancements, such as additional fortification with other nutrients, to meet diverse dietary needs.

Keywords: calcium carbonate, gluten-free food products, nutritional analysis, physicaland sensory properties , grounded almond, sustainability

VALORIZATION OF COCONUT HAUSTORIUM, A VALUE ADDED INGREDIENT IN A CASHEW-BASED BAKED DESSERT

A PROJECT REPORT

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ABSTRACT

The project aimed to evaluate the potential of Coconut haustorium for use in desserts through various cake combinations. The 20% proportion of coconut haustorium was found to be highly nutritious and showed a significant increase in acceptability. Nutritional and sensory analyses were conducted, demonstrating the safety and viability of this approach. The study highlights the importance of utilizing underutilized food sources, such as Coconut haustorium, for developing innovative and nutritious desserts that can contribute to providing additional health benefits of bioactive compounds and enzymes. The findings of this study could have significant implications for the food industry and human health, paving the way for the utilization of underutilized food sources for nutritional purposes. This study highlights the potential of coconut haustorium to serve as an excellent source of dietary fiber, minerals, proteins and healthy fats and its significance in adding potential health benefits of bioactive compounds such as antioxidant properties, anti-inflammatory effects, digestive health, etc. Further research in this area could lead to the development of more innovative new products promoting sustainable food ecosystems.

Keywords: Coconut haustorium, nutritional analysis, sensory analysis, dietary fiber, bioactive compounds, underutilized food sources, sustainability

COMPARATIVE ANALYSIS OF FUMIGANT TOXICITY OF PHYTOCHEMICAL EXTRACTS OF SPICE WASTES WITH SPICE ESSENTIAL OILS: AN APPROACH FOR ECOFRIENDLY INSECT PEST MANAGEMENT AND WASTE MANAGEMENT

A PROJECT REPORT

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INTERNAL EXAMINER

11/5/24

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ABSTRACT

The aim of the study is to develop and extract phytochemicals from the onion and garlic peel wastes to evaluate insecticidal activities of the extracted phytochemicals against stored products insect pests. Food security and post harvest management is an important aspect in Indian economy. Post harvest storage loss is a critical issue and big challenge to mankind to meet nutritional demands of growing population. Storage losses are less in developed countries, while they are well managed with aeration and drying. Both abiotic and biotic factors are causing severe damage to post harvest storage. Insect pest infestation alone causes around 5 to 30% of agricultural production across the globe. Fumigation is the most common chemical control method for protecting stored food grains from insect pests. Phosphine and Methyl bromide fumigants have been used for more than decades to control stored product insect pests. Due to the adverse effects of these chemicals on the environment and human health, researchers have been finding natural alternatives. The main aim of biopesticides is to be effective against target pests, without harming humans and environment .Garlic (*Allium sativum*) is most common dietary and medicinal spice having strong insecticidal activity and has been reported to control several stored product insect species through their fumigant, contact, repellent and antifeedant action.Onion oil has been used as a flavouring agent, and it is well known for its medicinal properties. *Sitophilus oryzae* is one of the major insects of stored grains. It causes weight loss in grains, and affects the quality of grains and stored products across the globe.Therefore the final aim of the experiment is to extract phytochemicals from onion and garlic peel wastes with the intention of waste management and ecofriendly interaction towards environment by avoiding chemical use.

Keywords : *Sitophilus oryzae, Allium sativum, Fumigation, biopesticides*

INCORPORATION OF COCONUT (*Cocos nucifera*) IN CURD FOR FLAVORED PRODUCT DEVELOPMENT

A PROJECT REPORT

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ABSTRACT

Fermentation, a technique utilized for fermenting lactose in the milk to lactic acid using bacterial cultures. One of the methods can be used to prepare exciting and innovative dips of coconut flavored curd. These delicious curd dips not only boost an unique aroma, flavor, texture etc. but also introduce probiotic flora into the diet. The production of acid lowers the PH and hence other microbes can't grow on them, which contributes to its preservative nature.The goal of this study is to create a range of coconut flavoured curd dips in various distinctive taste that appeal to consumers. Two different flavours (sweet and spicy) are prepared with coconut flavoured curd. The proximate analysis and nutritional analysis of the both are carried out.

KEYWORDS : Fermentation, coconut milk, proximate analysis, nutritional analysis

NUTRITIVE FISH PICKLE FROM FRIGATE TUNA

(*Auxis thazard*)

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INTERNAL EXAMINER

11/5/24

EXTERNAL EXAMINER

ABSTRACT

A value added product, 'fish pickle' was developed from Frigate Tuna *(Auxis thazard)* and stored at ambient conditions. This project focused on the development and analysis of fish pickle, aiming to understand crucial parameters impacting its quality, safety, and shelf life. The development process involved meticulously controlling ingredients and processing methods to ensure the production of a high-quality product. The results and discussion highlighted key insights into moisture content, pH levels, acidity, sodium chloride content, and microbial stability. With a moisture content of 36.8%, careful monitoring was essential to prevent microbial growth and spoilage, ensuring product stability and extending shelf life. Maintaining pH levels within the range of 4.0 to 4.5 was crucial for inhibiting pathogenic bacteria and preserving taste, texture, and sensory attributes. Acetic acid, measured at 2.8gm, acted as a natural preservative while imparting the characteristic tangy flavor, emphasizing the need for precise control to balance taste and microbial inhibition. Sodium chloride content, at 9.84gm, enhanced flavor and preserved the pickle, but moderation was key to avoiding health risks associated with excessive salt intake. The analysis of microbial stability revealed initial stability up to the third week, but microbial presence, including coliforms and yeast and mold, was detected by the fourth week, suggesting a shorter shelf life without preservatives. In conclusion, the development and analysis of fish pickle underscored the importance of meticulously controlling parameters to ensure the production of a high-quality, safe product that met regulatory standards and consumer expectations. Consumption of fish pickle within one month of manufacturing was recommended to ensure safety and freshness.

FORMULATION AND DEVELOPMENT OF CAJUN FLAVORED BURGER PATTY

A PROJECT REPORT

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EXTERNAL EXAMINER

ABSTRACT

This project aims to develop a Cajun-flavored burger patty that embodies the rich culinary heritage of Louisiana's Bayou region. Drawing inspiration from traditional Cajun spices and flavors, including paprika, garlic, onion, cayenne pepper, and herbs like thyme and oregano, the burger patty will offer a harmonious blend of heat, savory depth, and aromatic complexity. Through a systematic approach, the project will focus on achieving the perfect balance of flavors and textures, ensuring that each bite delivers an authentic Cajun experience. Experimentation with various spice ratios, ingredient combinations, and cooking techniques will be conducted to refine the recipe and optimize its appeal to discerning palates. Furthermore, attention will be given to the sourcing of high-quality ingredients, with an emphasis on locally sourced produce and spices to support sustainability and community engagement. The project will also explore innovative ways to enhance the patty's juiciness and tenderness, perhaps through the incorporation of Cajun-inspired marinades or brines. Ultimately, the goal of this project is to create a Cajun-flavored burger patty that transcends the ordinary, offering a tantalizing fusion of Southern comfort and culinary excellence. Whether enjoyed on its own, nestled within a pillowy bun, or paired with traditional Cajun accompaniments like remoulade sauce or fried green tomatoes, Bayou Bliss promises to delight taste buds and evoke the vibrant spirit of the Louisiana Bayou with every bite.

Key words: *Chicken, Cajun spice mix, Burger patty, Sensory analysis, Nutritional analysis.*

DEVELOPMENT OF GUAVA FLAVORED WHEY DRINK

A PROJECT REPORT

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VARSHA D	**(720920218050)**

In partial fulfillment for the award of the degree

Of

BACHELOR OF TECHNOLOGY

IN

FOOD TECHNOLOGY

JCT COLLEGE OF ENGINEERING AND TECHNOLOGY

COIMBATORE

ANNA UNIVERSITY: CHENNAI- 600025

APRIL 2024

ANNA UNIVERSITY: CHENNAI 600 025

BONAFIDE CERTIFICATE

Certified that this project report "**DEVELOPMENT OF GUAVA FLAVORED WHEY DRINK** is the bonafide work of **ISHWARYARAI R (720920218020), SANTHA MOORTHY S (720920218042), VARSHA D (720920218050)** who carried out the project work under my supervision.

SIGNATURE
Dr. P. BALAMURUGAN Ph.D.,
HEAD OF THE DEPARTMENT
FOOD TECHNOLOGY
JCT COLLEGE OF ENGINEERING TECHNOLOGY
COIMBATORE- 641105

SIGNATURE
Dr. M. INDUMATHI Ph.D..
ASSOCIATE PROFESSOR
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JCT COLLEGE OF ENGINEERING TECHNOLOGY
COIMBATORE- 641105

Submitted for the Anna University Examination held on 11.05.2024 at JCT College of Engineering and Technology.

INTERNAL EXAMINER

11/6/24

EXTERNAL EXAMINER

Abstract

The utilization of guava pulp in the development of whey based beverage showed a great benefit to the dairy industry. The aim was the development of whey guava blended beverage. The ratio of whey and guava pulp that were utilized for the preparation of beverage is 67.5% whey and 20% guava pulp. Different processing time temperature combinations were given to it at 60°C, 65°C and 70°C.Samples were evaluated initially and after that at an interval of 15, 30, 45, 60, 75 and 90 days for sensory analysis including taste, color, aroma and overall acceptability, chemical and microbial analysis. It was found that whey guava beverages pasteurized for 65°C for 25 minutes was found to be best in terms of sensory quality after 45 days and pH, acidity, protein, total sugars and educing sugars found to be high than that of other samples. Effect of different temperatures, timings and storage periods on mean sensory score of whey guava beverage was significant and significant changes were observed in total sugars, reducing sugars, non reducing sugars, protein and vitamin C content.

Keywords: *Whey, Psidium guajava, Nutritional Analysis, Sensory Analysis*

"MANGO MAVEN: CRAFTING AN ECONOMICAL MANGO BEVERAGE WITH COMPREHENSIVE QUALITATIVE EVALUATION"

A PROJECT REPORT

Submitted by

M.NAVANITHA (720920218031)

AARDRA.S (720920218001)

In partial fulfilment for the award of the degree

of

BACHELOR OF TECHNOLOGY

in

FOOD TECHNOLOGY

JCT COLLEGE OF ENGINEERING AND TECHNOLOGY

COIMBATORE

ANNA UNIVERSITY: CHENNAI 600 025

APRIL&2024

ANNA UNIVERSITY: CHENNAI 600 025

BONAFIDE CERTIFICATE

Certified that this project report **"MANGO MAVEN: CRAFTING AN ECONOMICAL MANGO BEVERAGE WITH COMPREHENSIVE QUALITATIVE EVALUATION"** is the Bonafide work of **"M. NAVANITHA *(720920218031)*, AARDRA.S *(720920218001)*"** who carried out the project work under my supervision.

SIGNATURE

Dr. P. BALAMURUGAN Ph.D.,

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Ms. S. INDU

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Submitted for the Anna University Examination held on 11-05-2024 at JCT College of Engineering and Technolog

INTERNAL EXAMINER

EXTERNAL EXAMINER

ABSTRACT

This project aims to develop an economical mango beverage using Totapuri mango as the primary ingredient while conducting a comprehensive and qualitative evaluation in comparison to other mango varieties. The research will involve the formulation of the beverage, considering factors such as taste, aroma, texture, and nutritional value. Totapuri mango, known for its rich flavor and availability, will be compared with other popular mango varieties to assess its suitability for beverage production. The evaluation process will utilize sensory analysis techniques, including taste tests and aroma profiling, alongside nutritional analysis to determine the overall quality and market potential of the Totapuri-based beverage. The findings of this study will contribute to the development of cost-effective mango beverage formulations and offer insights into the utilization of Totapuri mango in the food and beverage industry. Totapuri mangoes, alongside other common varieties, offer a bounty of nutritional benefits. Rich in essential nutrients like vitamin C and vitamin A, these tropical fruits support immune function, promote healthy skin, and aid in vision. Their ample dietary fiber content aids digestion and contributes to gut health, while the presence of potassium supports cardiovascular health and fluid balance. Furthermore, mangoes boast a wealth of antioxidants, including beta-carotene and polyphenols, which help combat inflammation and protect against chronic diseases. Totapuri mangoes, prized for their sweet and tangy flavor, are esteemed for culinary use, providing similar nutritional advantages as other mango varieties.This study was to found a economical mango beverage without compromise the quality.

KEYWORDS- Totapuri mange, cost effective, Nutritious

Development of Tomato Flavoured Instant Flattened Rice Mix

A PROJECT REPORT

Submitted by

BALAJI M (720920218010)

MANIVASU V (720920218025)

PRAVEEN A (720920218035)

PRAVEEN S (720920218036)

SATHIYASEELAN M (720920218043)

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Of

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JCT COLLEGE OF ENGINEERING AND TECHNOLOGY

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APRIL 2024

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BONAFIDE CERTIFICATE

Certified that this project report "**Development of Tomato Flavoured Instant Flattened Rice Mix**" is the bonafide work of **BALAJI M (720920218010), MANIVASU V (720920218025), PRAVEEN A (720920218035), PRAVEEN S (720920218036), SATHIYASEELAN M (720920218043)** who carried out the project work under my supervision.

SIGNATURE

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INTERNAL EXAMINER

11/6/24

EXTERNAL EXAMINER

ABSTRACT

The core of this research is to create a nutritious and advanced breakfast mix using *'Oryza Sativa'* (also known as smooth rice or poha) as a staple food, providing a supportive yet healthy breakfast option. to meet the advanced needs of customers. The quality of milled rice is due to its quick reconstitution properties, culinary adaptability, and excellent nutritional profile, making it suitable for a variety of food mixtures and culinary applications. The idea is to create something that exceeds established nutritional standards, rather than something that doesn't, and that serves as a nutritious breakfast. The Definition Strategy includes a comprehensive approach to regulating safety and nutrition items. We focus on sourcing high quality ingredients rich in protein, carbohydrates, vitamins (e.g. vitamins A, B1, B6, C), minerals (e.g. potassium, calcium) and other supplements to ensure a healthy In order to maintain a healthy life and greater prosperity, essentiality and cognitive work are therefore key elements of a balanced breakfast plan. In the evolution of food composition, material properties play a fundamental role in improving foods. Minute Breakfast Blends undergo comprehensive and unique testing to evaluate flavour profiles, textural characteristics, fragrance notes, visual impressions, and overall flavour richness. Some of the information gleaned from clear analytics informs iterative changes in definitions to ensure retention of a specific customer base and enriched user experience.

A comprehensive nutritional assessment provides the basis for this idea and includes follow-up testing to measure protein, fat, carbohydrate, water, and shiny flotsam and jetsam. These tests provide detailed insight into the whole subject and allow for correct naming and guidance regarding nutritional recommendations and health considerations. Strict food safety traditions and

compliance with regulatory compliance measures, especially those prescribed by reputable regulatory bodies such as the Food Safety Regulations Master of India (FSSAI), ensure that consumer health and product quality assurance is of paramount importance. is emphasized. Incredible quality control measures are expertly executed across time continuums to control execution, planning procedures. bundle agreements, and capacity expansions to maintain judgment and foster customer confidence. In summary, this fast food initiative aims to provide delicious breakfasts that are a fun combination of culinary ingenuity, comfort, culinary charm and culinary advancement. By focusing on consistent care and culinary advancements, Minute Breakfast Mix develops healthier dietary preferences and improves the breakfast experience in line with the changing nutritional standards and lifestyle trends prevalent in modern society. We strive to strengthen our mindset.

Keywords: Instant Breakfast Mix, Oryza sativa, Nutritional Fortification, Sensory Evaluation, Food Safety Compliance, Regulatory Standards, Consumer Well-being.

DEVELOPMENT OF PUMPKIN PUDDING USING GOAT MILK

A PROJECT REPORT

Submitted by

SANDHIYA V	**(720920218040)**
HARINI MJ	**(720920218016)**
SANJAY KUMAR S	**(720920218041)**
NITHISHKUMAR P	**(720920218033)**
DINESH K	**(720920218013)**

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Of

BACHELOR OF TECHNOLOGY

IN

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JCT COLLEGE OF ENGINEERING AND TECHNOLOGY

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ANNA UNIVERSITY: CHENNAI- 600025

APRIL 2024

ANNA UNIVERSITY: CHENNAI 600 025

BONAFIDE CERTIFICATE

Certified that this project report "**DEVELOPMENT OF PUMPKIN PUDDING USING GOAT MILK**" is the bonafide work of **SANDHIYA V (720920218040), HARINI MJ (720920218016), SANJAY KUMAR S (720920218041), NITISHKUMAR P (720920218033), DINESH K (720920218013)** who carried out the project work under my supervision.

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Submitted for the Anna University Examination held on....11.5.2024.. at JCT College of Engineering and Technology.

INTERNAL EXAMINER

11/5/24

EXTERNAL EXAMINER

ABSTRACT

The aim of the study is to develop a highly nutritious pudding using goat milk and pumpkin (cucurbita pepo). Pudding is a type of food. It can be either a dessert, served after the main meal, or a savory (salty or spicy) dish, served as part of the main meal. In the United States, pudding means a sweet milk-based dessert similar in consistency to egg - based custard, instant custard or a mousse. Goat milk has many unique differences compared to cow milk. It contains higher amounts of certain nutrients compared to cow milk which have potential in providing a better effect on human health and also treats some diseases such as gastro-intestinal disorder. In this research, pudding was produced using goat milk instead of cow milk to increase the nutritive value of pudding. pumpkin is also incorporated into goat milk pudding to reduce the goaty odor and also flavor. It also contains some nutrients such as vitamin A, B1, B6, C and Fiber. Proximate tests were carried out to test the protein, fat, carbohydrate, moisture and also ash content of goat milk. Goat milk pudding contained higher value in protein (3.01 ± 0.12), fat (3.63 ± 0.01), carbohydrates (3.95 ± 0.00) and ash (0.91 ± 0.02) compared to cow milk pudding. AAS was carried out to test potassium and calcium value and also TPA for the firmness and rupture strength of pudding. The results showed that goat milk pudding had lower rupture strength and firmness compared to cow milk and this was due to the bigger size of casein micelles in goat milk which formed a softer curd. This study was to found a highly nutritious pudding based on goat milk.

KEYWORDS- Cucurbita pepo, goat milk, pudding, pumpkin.

MECHANICAL ENGINEERING

Internship Students List-Mechanical-(2023-24)

Sl. No.	Title of the collaborative activity	Name of the collaborating agency with contact details	Name of the participant	Year of collaboration	Duration
1	Internship	Hirotec India Pvt Ltd	Abhijith K J	2023-24	19.1.2024 to 27.1.2024
2	Internship	Hirotec India Pvt Ltd	Adithyan P R	2023-24	19.1.2024 to 27.1.2024
3	Internship	Hirotec India Pvt Ltd	Akhilesh Chittiyath Biju	2023-24	19.1.2024 to 27.1.2024
4	Internship	Hirotec India Pvt Ltd	Ansil M	2023-24	19.1.2024 to 27.1.2024
5	Internship	Hirotec India Pvt Ltd	Arun M	2023-24	19.1.2024 to 27.1.2024
6	Internship	Hirotec India Pvt Ltd	Dhanush Kumar A	2023-24	19.1.2024 to 27.1.2024
7	Internship	Hirotec India Pvt Ltd	Divakar A	2023-24	19.1.2024 to 27.1.2024
8	Internship	Hirotec India Pvt Ltd	Jayaprakash A	2023-24	19.1.2024 to 27.1.2024
9	Summer Internship	NSK BEARINGS INDIA PRIVATE LIMITED,	Arunjith S	2023-24	6.7.2023 to 17.7.2023
10	Summer Internship	NSK BEARINGS INDIA PRIVATE LIMITED,	Deepak Andrews A	2023-24	6.7.2023 to 17.7.2023
11	Summer Internship	NSK BEARINGS INDIA PRIVATE LIMITED,	Ebin Binoy	2023-24	6.7.2023 to 17.7.2023
12	Summer Internship	NSK BEARINGS INDIA PRIVATE LIMITED,	Gadrin Pius Paiva	2023-24	6.7.2023 to 17.7.2023
13	Summer Internship	NSK BEARINGS INDIA PRIVATE LIMITED,	Ganesh Pandi V	2023-24	6.7.2023 to 17.7.2023
14	Summer Internship	NSK BEARINGS INDIA PRIVATE LIMITED,	Jebin Bastine J	2023-24	6.7.2023 to 17.7.2023
15	Internship	Ashok Leyland	Kavin A	2023-24	10.7.2023 to 19.7.2023
16	Internship	Ashok Leyland	Manikandan S	2023-24	10.7.2023 to 19.7.2023
17	Internship	Ashok Leyland	Mathavan R	2023-24	10.7.2023 to 19.7.2023
18	Internship	Ashok Leyland	Muhammed Midlaj	2023-24	10.7.2023 to 19.7.2023
19	Internship	Ashok Leyland	Naveen N	2023-24	10.7.2023 to 19.7.2023
20	Internship	ACC Limited	Nidheesh K K	2023-24	19.1.2024 to 27.1.2024
21	Internship	ACC Limited	Raja V	2023-24	19.1.2024 to 27.1.2024
22	Internship	ACC Limited	Sarathi B	2023-24	19.1.2024 to 27.1.2024
23	Internship	ACC Limited	Shebeel Ibraheem M K	2023-24	19.1.2024 to 27.1.2024
24	Internship	ACC Limited	Sujith C	2023-24	19.1.2024 to 27.1.2024
25	Internship	ACC Limited	Vibin Lijo J	2023-24	19.1.2024 to 27.1.2024
26	Internship	Best Heat Treatment Services	Vishnu Kumar K R	2023-24	4.1.2024 to 13.1.2024
27	Internship	Best Heat Treatment Services	Arnold Ashin A	2023-24	4.1.2024 to 13.1.2024
28	Internship	Best Heat Treatment Services	Naveen Kumar P	2023-24	4.1.2024 to 13.1.2024
29	Internship	Best Heat Treatment Services	Srijith M	2023-24	4.1.2024 to 13.1.2024
30	Internship	Best Heat Treatment Services	Thiyagarajan S	2023-24	4.1.2024 to 13.1.2024
31	Internship	Best Heat Treatment Services	Arjun P M	2023-25	4.1.2024 to 13.1.2025

HOD

30.01.2024

TO WHOMSOEVER IT MAY CONCERN

This is to certify that **Abhijith K J (MECHANICAL ENGINEERING)** student from **JCT COLLEGE OF ENGINEERING &TECHNOLOGY, Coimbatore** has undergone Internship training in our organization during the period from 19.1.2024 to 27.1.2024**.**

We wish him best wishes in future accomplishments.

Regards

ARJUN SHANKAR.A

Manager- HR

Hirotec India Private Limited - Coimbatore

7/147, W Power House Rd, Keeranatham Post, Saravanampatti, Coimbatore, Tamil Nadu 641035, India

30.01.2024

TO WHOMSOEVER IT MAY CONCERN

This is to certify that **Adithyan P R (MECHANICAL ENGINEERING)** student from **JCT COLLEGE OF ENGINEERING &TECHNOLOGY, Coimbatore** has undergone Internship training in our organization during the period from 19.1.2024 to 27.1.2024**.**

We wish him best wishes in future accomplishments.

Regards

ARJUN SHANKAR.A

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30.01.2024

TO WHOMSOEVER IT MAY CONCERN

This is to certify that **Akhilesh Chittiyath Biju (MECHANICAL ENGINEERING)** student from **JCT COLLEGE OF ENGINEERING &TECHNOLOGY, Coimbatore** has undergone Internship training in our organization during the period from 19.1.2024 to 27.1.2024**.**

We wish him best wishes in future accomplishments.

Regards

ARJUN SHANKAR.A

Manager- HR

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30.01.2024

TO WHOMSOEVER IT MAY CONCERN

This is to certify that **Ansil M (MECHANICAL ENGINEERING)** student from **JCT COLLEGE OF ENGINEERING &TECHNOLOGY, Coimbatore** has undergone Internship training in our organization during the period from 19.1.2024 to 27.1.2024**.**We wish him best wishes in future accomplishments.

Regards

ARJUN SHANKAR.A

Manager- HR

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30.01.2024

TO WHOMSOEVER IT MAY CONCERN

This is to certify that **Arun M (MECHANICAL ENGINEERING)** student from **JCT COLLEGE OF ENGINEERING &TECHNOLOGY, Coimbatore** has undergone Internship training in our organization during the period from 19.1.2024 to 27.1.2024**.**

We wish him best wishes in future accomplishments.

Regards

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30.01.2024

TO WHOMSOEVER IT MAY CONCERN

This is to certify that **Dhanush Kumar A (MECHANICAL ENGINEERING)** student from **JCT COLLEGE OF ENGINEERING &TECHNOLOGY, Coimbatore** has undergone Internship training in our organization during the period from 19.1.2024 to 27.1.2024**.**

We wish him best wishes in future accomplishments.

Regards

ARJUN SHANKAR.A

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TO WHOMSOEVER IT MAY CONCERN

This is to certify that **Divakar A (MECHANICAL ENGINEERING)** student from **JCT COLLEGE OF ENGINEERING & TECHNOLOGY, Coimbatore** has undergone Internship training in our organization during the period from 19.1.2024 to 27.1.2024**.**

We wish him best wishes in future accomplishments.

Regards

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TO WHOMSOEVER IT MAY CONCERN

This is to certify that **Jayaprakash A (MECHANICAL ENGINEERING)** student from **JCT COLLEGE OF ENGINEERING &TECHNOLOGY, Coimbatore** has undergone Internship training in our organization during the period from 19.1.2024 to 27.1.2024**.**

We wish him best wishes in future accomplishments.

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ASHOK LEYLAND

Aapki Jeet. Hamari Jeet.

22-07-2023

TO WHOMSOEVER IT MAY CONCERN

This is to certify that **Kavin A (MECHANICAL ENGINEERING)** student from **JCT COLLEGE OF ENGINEERING & TECHNOLOGY, Coimbatore** has undergone Internship training in our organization during the period from 10.7.2023 to 19.7.2023.

We wish him best wishes in future endeavours.

Regards

G.Ramesh
Sr. Manager – Training & Development

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This is to certify that **Manikandan S (MECHANICAL ENGINEERING)** student from **JCT COLLEGE OF ENGINEERING & TECHNOLOGY, Coimbatore** has undergone Internship training in our organization during the period from 10.7.2023 to 19.7.2023.

We wish him best wishes in future endeavours.

Regards

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This is to certify that **Mathavan R (MECHANICAL ENGINEERING)** student from **JCT COLLEGE OF ENGINEERING & TECHNOLOGY, Coimbatore** has undergone Internship training in our organization during the period from 10.7.2023 to 19.7.2023.

We wish him best wishes in future endeavours.

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TO WHOMSOEVER IT MAY CONCERN

This is to certify that **Muhammed Midlaj (MECHANICAL ENGINEERING)** student from **JCT COLLEGE OF ENGINEERING & TECHNOLOGY, Coimbatore** has undergone Internship training in our organization during the period from 10.7.2023 to 19.7.2023.

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TO WHOMSOEVER IT MAY CONCERN

This is to certify that **Naveen N (MECHANICAL ENGINEERING)** student from **JCT COLLEGE OF ENGINEERING & TECHNOLOGY, Coimbatore** has undergone Internship training in our organization during the period from 10.7.2023 to 19.7.2023.

We wish him best wishes in future endeavours.

Regards

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MOTION & CONTROL
NSK

17th July 2023

TO WHOMSOEVER IT MAY CONCERN

We wish to inform you that, Mr. Arunjith S, has successfully completed his internship with our organisation from 6.7.2023 to 17.7.2023. During this period of internship he has shown great enthusiasm in understanding the functioning of the Manufacturing Department and its functions.

We wish him all success in his future endeavours!

For NSK Bearings India Pvt. Ltd.,

Sivakumar V

DGM – HR & General Affairs

NSK Bearings India Private Limited (Formerly NSK India Sales Company Private Limited)
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Works: Plot No.A2, SIPCOT Oragadam Growth Centre, Mathur Village, Sriperumbudur Taluk, Kancheepuram District, Tamilnadu – 602105 India
(CIN No. U29130TN2007PTC064307 / PAN AACCN5663R / GST No.: 33AACCN5663R1ZW) Web: www.nsk.com

MOTION & CONTROL
NSK

17th July 2023

TO WHOMSOEVER IT MAY CONCERN

We wish to inform you that, Deepak Andrews A, has successfully completed his internship with our organisation from 6.7.2023 to 17.7.2023.

During this period of internship he has shown great enthusiasm in understanding the functioning of the Manufacturing Department and its functions.

We wish him all success in his future endeavours!

For NSK Bearings India Pvt. Ltd.,

Sivakumar V

DGM – HR & General Affairs

Human Resource Development

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MK/HRD/2023-2024

29.01.2024

TO WHOMSOEVER IT MAY CONCERN

This is to certify that **Nidheesh K (MECHANICAL ENGINEERING)** student from **JCT COLLEGE OF ENGINEERING & TECHNOLOGY, Coimbatore** has undergone Internship training in our organization during the period from 19.1.2024 to 27.1.2024.

We wish him best wishes in future endeavors.

Regards

S.SARAVANAN

Manager- HR

Human Resource Development

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MK/HRD/2023-2024

29.01.2024

TO WHOMSOEVER IT MAY CONCERN

This is to certify that **Raja V (MECHANICAL ENGINEERING)** student from **JCT COLLEGE OF ENGINEERING & TECHNOLOGY, Coimbatore** has undergone Internship training in our organization during the period from 19.1.2024 to 27.1.2024.

We wish him best wishes in future endeavors.

Regards

S.SARAVANAN

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Human Resource Development

MK/HRD/2023-2024

29.01.2024

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This is to certify that **Sarathi B (MECHANICAL ENGINEERING)** student from **JCT COLLEGE OF ENGINEERING & TECHNOLOGY, Coimbatore** has undergone Internship training in our organization during the period from 19.1.2024 to 27.1.2024.

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Academic Year: 2023 – 2024 (EVEN Sem)

Sl No.	Batch	Students Reg No.	Students Name	Guide Name	Topic
1.	Batch 1	720920114009	DHILNATH K S	Mr. S. Radhakrishnan	Emission Reduction Using Nano biodiesel in Diesel Engine
2.		720920114013	KARAN M		
3.		720920114025	SANKEERTH SIVAN		
4.		720920114327	MADHAV R NAIR		
5.	Batch 2	720920114314	NIVED A. B	Mr. M. Prabhu	Physical And Combustion Characteristics of Sawdust and Ayurvedic Waste
6.		720920114316	PRAMOB K PRASAD		
7.		720920114320	SUJIL G		
8.		720920114321	UMESH M		
9.	Batch 3	720920114015	LAKSHMI K R	Dr M Vijayakumar	Physical And Combustion Characteristics of Briquettes Produced from Sawdust and Delonix Regia
10.		720920114311	MIRUNALAN M		
11.		720920114032	SURESH D		
12.		720920114317	PRAVEEN S		
13.	Batch 4	720920114007	AVDHESH KUMAR	Dr I. J. Issac prem Kumar	Elemental and Structural analysis Of Sawdust and Herbal Waste
14.		720920114024	SANJEET KUMAR		
15.		720920114027	SANTOSH KUMAR		
16.		720920114033	VIKASH KUMAR BITTU		
17.	Batch 5	720920114002	AKASH S	Mr D Ananda Kumar	Analysis of Tool Wear and Surface Roughness using MQL with Nanoparticle
18.		720920114304	ANSHAD V A		
19.		720920114309	JOEL P		
20.		720920114326	NIMAL VARGHESE V		

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21.	Batch 6	720920114022	SAKTHI B	Mr. R. Magendran	Multipurpose Seed Sowing with Weed Remover and Fertilizer Spraying Mach
22.		720920114312	MONESH J		
23.		720920114315	PRABHU M		
24.		720920114318	R. VIMAL GLADIN		
25.	Batch 7	720920114001	ADHARSH T K	Mr. P. Siva	Fabrication Of Electric Bicycle
26.		720920114011	JITHIN MOORTHY N		
27.		720920114301	ABINANDH CC		
28.		720920114319	SHIBU.TK		
29.	Batch 8	720920114031	STEFFIN STEPHEN T	Mr. R. Magendran	Design and Fabrication of Piezoelectric Shoes
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31.		720920114012	KANNAN S		
32.		720920114303	AKASH S		

Project coordinator **HOD**

FABRICATION OF ELECTRIC BICYCLE

A PROJECT REPORT

Submitted by

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BACHELOR OF ENGINEERING

in

MECHANICAL ENGINEERING

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COIMBATORE

ANNA UNIVERSITY: CHENNAI- 600 025

MAY 2024

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Certified that this project report **"FABRICATION OF ELECTRIC BICYCLE"** is the BONAFIDE work of **"JITHIN MOORTHY N, ABINANDH C C,SHIBU TK, ADHARSH TK"** who carried out the project work under my supervision

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INTERNAL EXAMINER

EXTERNAL EXAMINER

ABSTRACT

There is growing demand for Electric motor bicycle in India as there will be less air pollution,lower maintenance cost and reduced noise using electric motor bicycle. The motive of this research work is to design a simple, cost-effective model of electric motor bicycle with intelligent controller. The electric motor bicycle is consisting of motor,battery and controller. In this DC motor is fixed in the carrier of the cycle. The controller is connected to the motor and battery to control speed of motor and current. The electric motor bicycle can be run with battery charge.In today's world, the pollution is increasing terribly fast and imprompt owing to the serious usage of fuels, thanks to that air is contaminating at a high rate that ends up in a varied severe diseases. and therefore the price of fossil fuels is additionally increasing day by day in addition as government policy is additionally try and minimize of region pollution in encompassing. So, electrical bicycles are used because the pillars that support individual conveyance in massive cities.

ANALYSIS OF TOOL WEAR AND SURFACE ROUGHNESS USING MQL WITH NANOPARTICLES

A PROJECT REPORT

Submitted by

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BONAFIDE CERTIFICATE

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INTERNAL EXAMINER

EXTERNAL EXAMINER

ABSTRACT

In this paper, the effect of cutting parameters on the workpiece surface roughness and tool wear was investigated in end turning of Ti-6Al-4V Titanium alloy using all gear lathe. The experiments were carried out using full factorial experimental design method. The experiments were performed under different cooling methods (dry, minimum quantity lubrication (MQL) and nano cutting fluid) and different turning parameters (cutting speed and feed rate) using HSS and solid carbide turning tools. The surface roughness was measured using Mitutoyo SJ-201 surface tester. The tool wear was measured using Mitutoyo optical microscope. The results obtained from the experiments show that both the surface roughness and the tool wear increased with the increasing feed rate and cutting speed. While the highest surface roughness and tool wear occurred in dry machining, the lowest surface roughness and tool wear obtained in machining with the nano cutting fluid. The optimum cutting performance was obtained using the nano cutting fluid and carbide cutting tool.

MULTIPURPOSE SEED SOWING WITH WEED REMOVER AND FERTILIZER SPRAYING MACHINE

A PROJECT REPORT

Submittedby

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10-06-2024

INTERNAL EXAMINER

EXTERNAL EXAMINER

ABSTRACT

The seed sowing machine is used to sowing the seeds into land for making lots of plant production in agricultural field. It is a mechanical device here the electrical or other power source is required. The cost of this machine is low and easy to operate simple in construction. As there is tremendous development in the field of engineering the current scenario makes us to find solution for major problems faced by the agricultural field. Lot of equipment was inverted to sophisticate the work of labour in the farms. The seed sowing machine is used to sowing the seeds into land for making lots of plant production in agricultural field. It is a mechanical device here the electrical or other power source is required. The cost of this machine is low and easy to operate simple in construction. As there is tremendous development in the field of engineering the current scenario makes us to find solution for major problems faced by the agricultural field. Lot of equipment was inverted to sophisticate the work of labour in the farms.

ELEMENTAL AND STRUCTURAL ANALYSIS OF SAWDUST AND HERBAL WASTE

A PROJECT REPORT

Submitted by

AVDHESH KUMAR	**720920114007**
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INTERNAL EXAMINER

15/5

EXTERNAL EXAMINER

ABSTRACT

Sawdust and herbal waste are abundant organic materials generated from variousindustrial and agricultural processes. Understanding their elemental and structural composition is crucial for exploring their potential applications in sustainable practices such as biomass conversion, soil improvement, and bioenergy production. In this study, sawdust and herbal waste were subjected to comprehensive elemental and structural analyses using Scanning Electron Microscopy (SEM) and energy-dispersive X-ray Analysis (EDX).

The elemental analysis revealed the presence of carbon, hydrogen, oxygen, nitrogen, and trace elements in both sawdust and herbal waste. Carbon and oxygen were found to be the dominant elements, indicative of their organic nature. The elemental composition varied slightly between the two materials, with herbal waste showing slightly higher nitrogen content, potentially due to itsplant origin.

Structural analysis using SEM provided insights into the morphological characteristics of sawdust and herbal waste. Sawdust exhibited a fibrous structure with irregular shapes and rough surfaces, typical of wood-derived materials. In contrast, herbal waste displayed a more heterogeneous structure with a combination of fibrous and granular components, reflecting its diverse botanical composition.

Overall, the elemental and structural analysis of sawdust and herbal waste provides valuable information for understanding their composition and potential applications. These findings contribute to the growing body of knowledge on utilizing agricultural and industrial by-products for sustainable development and resource utilization.

KEYWORDS - Sawdust, Herbal Waste, Structural and Elemental Analysis, Edax, Sem, carbon content, sulphur content, etc.

EMISSION REDUCTION USING NANOBIODIESEL IN DIESEL ENGINE

A PROJECT REPORT

Submitted by

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INTERNAL EXAMINER

EXTERNAL EXAMINER

ABSTRACT

The present project work uses a blend of Cashew nut shell biodiesel, diesel, and graphene amine nanoparticles to enhance the performance, combustion and symmetric characteristics and to reduce the emissions from the diesel engine of a modified conventional mechanical fuel injection system (CMMFIS). The research aims to study the effect of two fuel additives, and graphene amine nanoparticles, in improving the fuel properties of Cashew nut shell biodiesel (CAWNSOB B20). The graphene amine nano-additive and sodium dodecyl benzene sulphonate (SDBS) surfactant are added to CAWNSOB B20 in the form of nanofluid in varying proportions. The nanofluids were prepared using a probe sonication process to prevent nanoparticles from agglomerating in the base fluid. The process is repeated for biodiesel, and nanofluid, and four different stable and symmetric nano-fuel mixtures are prepared by varying the graphene oxide (20, 40, 60 and 80 ppm). The nano-fuel blend CAWNSOB B20GO60 displayed an enhancement in the brake thermal efficiency (BTE) and a reduction in brake-specific fuel consumption (BSFC) at maximum load due to high catalytic activity and the enhanced micro-explosion phenomenon developed by graphene amine nanoparticles. The heat release rate (HRR), peak pressure increased, while exhaust gas temperature (EGT) decreased. Smoke, hydrocarbon (HC), carbon monoxide (CO_2) and carbon monoxide .

PHYSICAL AND COMBUSTION CHARACTERISTICS OF SAWDUST AND AYURVEDIC WASTE

A PROJECT REPORT

Submitted by

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Certified that this project report **"PHYSICAL AND COMBUSTION CHARACTERISTICS OF SAWDUST AND AYURVEDIC WASTE"** is the bonafide work of **NIVED AB (720920114314), PRAMOB K PRASAD (720920114316), SUJIL G (720920114320), UMESH M (720920114321)** who carried out the project work under my supervision

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INTERNAL EXAMINER

EXTERNAL EXAMINER

ABSTRACT

Briquette quality is evaluated mainly by briquette density. Briquette density is very important from the point of point of manipulation, burning speed, briquette durability, etc. The present study deals with the determination of physical and combustion characteristics like length, diameter, mass, density, moisture content, total ash content, fixed carbon, volatile matter, gross calorific values (as on basis & on dry basis) of Sawdust and ayurvedic waste. During our research theoretical analyses of parameters which have an impact on briquette quality were conducted. For quality evaluation of the manufactured briquette, the density and strength properties were determined. To determine the calorific value and proximate analyses of briquettes using the test carried out in universal electro hydraulic machines, pollachi, Coimbatore, and analyses the result in graphical representation.

KEYWORDS

Sawdust and ayurvedic, Moisture content, volatile matter, fixed carbon, Total Ash content, Gross Calorific Value.

DESIGN AND FABRICATION OF PIEZOELECTRIC SHOES

A PROJECT REPORT

Submitted by

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INTERNAL EXAMINER

EXTERNAL EXAMINER

ABSTRACT

The demand for clean renewable energy has increased due to the facts that the traditional sources of energy are the main cause of pollution, global warming and inherently non-renewable. Therefore, engineers start harvesting power from sun, wind, geothermal and many other mechanical or heat sources. In this project shoes are designed that yield the kinetic energy of the movement of the human body to generate electricity that can be used to power sensors, small appliances and even to charge a mobile phone battery.

In our times, the importance of energy efficiency is known by anyone. Besides, it is possible to reclaim the energy consumed by means of the developed technology. In this study, it is aimed to reclaim the energy transferred to the ground while people are walking in their daily lives by using piezoelectric materials, which convert mechanical energy into electrical energy. Having designed a sole to serve this goal, different piezoelectric materials are placed into the sole. Its behaviors under human weight are observed using computer software. For this reason, parametric analyses were carried out using 50, 60, 70, 80, and 90 kg, PZT-5H and PZT-8 piezoelectric ceramics and frames made of steel and aluminum materials as holding bodies of piezoelectric ceramics as human bodies. As a result of the analysis, a system of PZT-5H piezoelectric ceramic with a steel frame integrated into a human shoe of a weight of 90 kg used, showing that 0.4% of the applied force can be harvested to 1.43 mW of electrical power

PHYSICAL AND COMBUSTION CHARACTERISTICS OF BRIQUETTES PRODUCED FROM SAWDUSTAND DELONIX REGIA

A PROJECT REPORT

Submitted by

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in partial fulfillment for the award of the degree

0f

BACHELOR OF ENGINEERING

IN

MECHANICAL ENGINEERING

JCT COLLEGE OF ENGINEERING AND TECHNOLOGY

COIMBATORE- 641105

ANNA UNIVERSITY: CHENNAI 600 025

MAY 2024

JCT

ANNA UNIVERSITY: CHENNAI 600 025

BONAFIDE CERTIFICATE

Certified that this project report "**PHYSICAL AND COMBUSTION CHARATERISTICS OF BRIQUETTES PRODUCED FROM SAWDUST & DELONIX REGIA**" is the bonafide work of **"LAKSHMI KR, SURESH D, MIRUNALAN M, PRAVEEN S"** who carried out the project work under my supervision.

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INTERNAL EXAMINER

EXTERNAL EXAMINER

ABSTRACT

Briquette quality is evaluated mainly by briquette density. Briquette density is very important from the point of manipulation, burning speed, briquette durability, etc. The present study deals with the determination of physical and combustion characteristics like length, diameter, mass, density, moisture content, total ash content, fixed carbon, volatile matter, gross calorific values (as on basis &on dry basis) of Sawdust briquettes and Delonix regia. During our research theoretical analyses of parameters which have an impact on briquette quality were conducted. For quality evaluation of the manufactured briquette, the density and strength properties were determined. To determine the calorific value and proximate analyses of briquettes using the test carried out in Specialized testing services, Coimbatore, and analyses the result in graphical representation.

KEYWORDS: Sawdust and Delonix regia, Moisture content, volatile matter, fixed carbon, Briquette, Total Ash content, Gross Calorific Value, Proximate analysis.

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Organized at CIPET:Palakkad ..... *from* ....19.03.2024.... *to*23.03.2024.....

[redacted]

Date: 23.03.2024

COURSE COORDINATOR

TRAINING I/C - VTC

CENTRE HEAD

CENTRAL INSTITUTE OF PETROCHEMICALS ENGINEERING & TECHNOLOGY (CIPET)

केंद्रीय पेट्रोरसायन अभियांत्रिकी एवं प्रौद्योगिकी संस्थान (सिपेट)

(Formerly Central Institute of Plastics Engineering & Technology)

(Department of Chemicals & Petrochemicals, Ministry of Chemicals & Fertilizers, Govt. of India)

HEAD OFFICE : GUINDY, CHENNAI - 600 032.

CENTRE: CIPET:PALAKKAD

Certificate No.: A 188646

CERTIFICATE / प्रमाणपत्र

This is to certify that

Shri / Smt. / Ms. NAVIN JOSE S

S/o / D/o / W/o Shri. Sunil Jose

has successfully completed the training programme titled

Fundamentals of Polymer Synthesis and Characterization Technique

Organized at CIPET:Palakkad from 19.03.2024 to 23.03.2024

[redacted]

Date: 23.03.2024

COURSE COORDINATOR

TRAINING I/C - VTC

CENTRE HEAD

CENTRAL INSTITUTE OF PETROCHEMICALS ENGINEERING & TECHNOLOGY (CIPET)

केंद्रीय पेट्रोरसायन अभियांत्रिकी एवं प्रौद्योगिकी संस्थान (सिपेट)

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HEAD OFFICE : GUINDY, CHENNAI - 600 032.

सिपेट CIPET

CENTRE: CIPET:PALAKKAD

Certificate No.: A 188647

CERTIFICATE / प्रमाणपत्र

This is to certify that

Shri / Smt. / Ms. RAJESHWAR S

S/o / D/o / W/o Shri. Selvam R

has successfully completed the training programme titled

Fundamentals of Polymer Synthesis and Characterization Technique

Organized at CIPET:Palakkad from 19.03.2024 to 23.03.2024

Date: 23.03.2024

COURSE COORDINATOR

TRAINING I/C - VTC

CENTRE HEAD

CENTRAL INSTITUTE OF PETROCHEMICALS ENGINEERING & TECHNOLOGY (CIPET)

केंद्रीय पेट्रोरसायन अभियांत्रिकी एवं प्रौद्योगिकी संस्थान (सिपेट)

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HEAD OFFICE : GUINDY, CHENNAI - 600 032.

CENTRE: CIPET:PALAKKAD

Certificate No.: A 188651

CERTIFICATE / प्रमाणपत्र

This is to certify that

Shri / Smt. / Ms. ..... **SAFWAN M R** .....

S/o / D/o / W/o ..... ***Shri. J.Mohammed Raffi.*** .....

has successfully completed the training programme titled

Fundamentals of Polymer Synthesis and

Characterization Technique

Organized at CIPET:Palakkad ..... from ....19.03.2024.... to23.03.2024.....

[redacted]

Date: 23.03.2024

COURSE COORDINATOR

TRAINING I/C - VTC

CENTRE HEAD

CENTRAL INSTITUTE OF PETROCHEMICALS ENGINEERING & TECHNOLOGY (CIPET)

केंद्रीय पेट्रोरसायन अभियांत्रिकी एवं प्रौद्योगिकी संस्थान (सिपेट)

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(Department of Chemicals & Petrochemicals, Ministry of Chemicals & Fertilizers, Govt. of India)

HEAD OFFICE : GUINDY, CHENNAI - 600 032.

सिपेट CIPET

CENTRE: CIPET:PALAKKAD

Certificate No.: A 188652

CERTIFICATE / प्रमाणपत्र

This is to certify that

Shri / Smt. / Ms. SELVENDHIRAN .V

S/o / D/o / W/o *Shri. Vengateshwaran. M.*

has successfully completed the training programme titled

Fundamentals of Polymer Synthesis and Characterization Technique

Organized at CIPET:Palakkad from 19.03.2024 to 23.03.2024

[redacted]

Date: 23.03.2024

COURSE COORDINATOR | TRAINING I/C - VTC | CENTRE HEAD

CENTRAL INSTITUTE OF PETROCHEMICALS ENGINEERING & TECHNOLOGY (CIPET)

केंद्रीय पेट्रोरसायन अभियांत्रिकी एवं प्रौद्योगिकी संस्थान (सिपेट)

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(Department of Chemicals & Petrochemicals, Ministry of Chemicals & Fertilizers, Govt. of India)

HEAD OFFICE : GUINDY, CHENNAI - 600 032.

CENTRE: CIPET:PALAKKAD

Certificate No.: A 188653

CERTIFICATE / प्रमाणपत्र

This is to certify that

Shri / Smt. / Ms. **SERAH C REJI**

S/o / D/o / W/o ***Shri. Reji Joseph***

has successfully completed the training programme titled

Fundamentals of Polymer Synthesis and Characterization Technique

Organized at ***CIPET:Palakkad*** *from* ***19.03.2024*** *to* ***23.03.2024***

[redacted]

Date: 23.03.2024

COURSE COORDINATOR

TRAINING I/C - VTC

CENTRE HEAD

CENTRAL INSTITUTE OF PETROCHEMICALS ENGINEERING & TECHNOLOGY (CIPET)

केंद्रीय पेट्रोरसायन अभियांत्रिकी एवं प्रौद्योगिकी संस्थान (सिपेट)

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HEAD OFFICE : GUINDY, CHENNAI - 600 032.

CENTRE: CIPET:PALAKKAD

Certificate No.: A 188660

CERTIFICATE / प्रमाणपत्र

This is to certify that

Shri / Smt. / Ms. SUNEESH V

S/o / D/o / W/o *Shri. Balasubramanian*

has successfully completed the training programme titled

Fundamentals of Polymer Synthesis and Characterization Technique

Organized at CIPET:Palakkad from 19.03.2024 to 23.03.2024

[redacted]

Date: 23.03.2024

COURSE COORDINATOR

TRAINING I/C - VTC

CENTRE HEAD

CENTRAL INSTITUTE OF PETROCHEMICALS ENGINEERING & TECHNOLOGY (CIPET)

केंद्रीय पेट्रोरसायन अभियांत्रिकी एवं प्रौद्योगिकी संस्थान (सिपेट)

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(Department of Chemicals & Petrochemicals, Ministry of Chemicals & Fertilizers, Govt. of India)

HEAD OFFICE : GUINDY, CHENNAI - 600 032.

CENTRE: CIPET:PALAKKAD

Certificate No.: A 188655

CERTIFICATE / प्रमाणपत्र

This is to certify that

Shri / Smt. / Ms. SUTHAN R

S/o / D/o / W/o Shri. Ravi S

has successfully completed the training programme titled

Fundamentals of Polymer Synthesis and Characterization Technique

Organized at CIPET:Palakkad from 19.03.2024 to 23.03.2024

Date: 23.03.2024

COURSE COORDINATOR

TRAINING I/C - VTC

CENTRE HEAD

CENTRAL INSTITUTE OF PETROCHEMICALS ENGINEERING & TECHNOLOGY (CIPET)

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(Department of Chemicals & Petrochemicals, Ministry of Chemicals & Fertilizers, Govt. of India)

HEAD OFFICE : GUINDY, CHENNAI - 600 032.

सिपेट CIPET

CENTRE: CIPET:PALAKKAD

Certificate No.: A 188656

CERTIFICATE / प्रमाणपत्र

This is to certify that

Shri / Smt. / Ms. THARICK K

S/o / D/o / W/o *Shri. Kassim.S M*

has successfully completed the training programme titled

Fundamentals of Polymer Synthesis and Characterization Technique

Organized at CIPET:Palakkad from 19.03.2024 to 23.03.2024

[redacted]

Date: 23.03.2024

COURSE COORDINATOR

TRAINING I/C - VTC

CENTRE HEAD

CENTRAL INSTITUTE OF PETROCHEMICALS ENGINEERING & TECHNOLOGY (CIPET)

केंद्रीय पेट्रोरसायन अभियांत्रिकी एवं प्रौद्योगिकी संस्थान (सिपेट)

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(Department of Chemicals & Petrochemicals, Ministry of Chemicals & Fertilizers, Govt. of India)

HEAD OFFICE : GUINDY, CHENNAI - 600 032.

CENTRE: CIPET:PALAKKAD

Certificate No.: A 188657

CERTIFICATE / प्रमाणपत्र

This is to certify that

Shri / Smt. / Ms. VISHAAK VB

S/o / D/o / W/o Shri. Balakrishnan

has successfully completed the training programme titled

Fundamentals of Polymer Synthesis and Characterization Technique

Organized at CIPET:Palakkad from 19.03.2024 to 23.03.2024

[redacted]

Date: 23.03.2024

COURSE COORDINATOR

TRAINING I/C - VTC

CENTRE HEAD

CENTRAL INSTITUTE OF PETROCHEMICALS ENGINEERING & TECHNOLOGY (CIPET)

केंद्रीय पेट्रोरसायन अभियांत्रिकी एवं प्रौद्योगिकी संस्थान (सिपेट)

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(Department of Chemicals & Petrochemicals, Ministry of Chemicals & Fertilizers, Govt. of India)

HEAD OFFICE : GUINDY, CHENNAI - 600 032.

CENTRE: CIPET:PALAKKAD

Certificate No.: A 188629

CERTIFICATE / प्रमाणपत्र

This is to certify that

Shri / Smt. / Ms. ABI SIVANESWARAN V

S/o / D/o / W/o *Shri. Vetrival*

has successfully completed the training programme titled

Fundamentals of Polymer Synthesis and Characterization Technique

Organized at *CIPET:Palakkad* *from* *19.03.2024* *to* *23.03.2024*

[redacted]

Date: 23.03.2024

COURSE COORDINATOR

TRAINING I/C - VTC

CENTRE HEAD

CENTRAL INSTITUTE OF PETROCHEMICALS ENGINEERING & TECHNOLOGY (CIPET)

केंद्रीय पेट्रोरसायन अभियांत्रिकी एवं प्रौद्योगिकी संस्थान (सिपेट)

(Formerly Central Institute of Plastics Engineering & Technology)

(Department of Chemicals & Petrochemicals, Ministry of Chemicals & Fertilizers, Govt. of India)

HEAD OFFICE : GUINDY, CHENNAI - 600 032.

CENTRE: CIPET:PALAKKAD

Certificate No.: A 188649

CERTIFICATE / प्रमाणपत्र

This is to certify that

Shri / Smt. / Ms. S.DHARAN KUMAR

S/o / D/o / W/o *Shri. R.Sundaravel.*

has successfully completed the training programme titled

Fundamentals of Polymer Synthesis and Characterization Technique

Organized at CIPET:Palakkad from 19.03.2024 to 23.03.2024

[redacted]

Date: 23.03.2024

COURSE COORDINATOR

TRAINING I/C - VTC

CENTRE HEAD

CENTRAL INSTITUTE OF PETROCHEMICALS ENGINEERING & TECHNOLOGY (CIPET)

केंद्रीय पेट्रोरसायन अभियांत्रिकी एवं प्रौद्योगिकी संस्थान (सिपेट)

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(Department of Chemicals & Petrochemicals, Ministry of Chemicals & Fertilizers, Govt. of India)

HEAD OFFICE : GUINDY, CHENNAI - 600 032.

सिपेट CIPET

CENTRE: CIPET:PALAKKAD

Certificate No.: A 188654

CERTIFICATE / प्रमाणपत्र

This is to certify that

Shri / Smt. / Ms. SIBIANANDHA M

S/o / D/o / W/o Shri. Mohan K

has successfully completed the training programme titled

Fundamentals of Polymer Synthesis and Characterization Technique

Organized at CIPET:Palakkad from 19.03.2024 to 23.03.2024

[redacted]

Date: 23.03.2024

COURSE COORDINATOR

TRAINING I/C - VTC

CENTRE HEAD

ओएनजीसी
ONGC

ऑयल एण्ड नेचुरल गैस कारपोरेशन लिमिटेड
Oil and Natural Gas Corporation Limited
ओएनजीसी अकादमी, देहरादून
ONGC Academy, Dehra Dun
ISO 9001 : 2015 Certified

Training Completion Certificate

This is to certify that Mr./Ms. NITHISH KUMAR a student of "JCT College of Engineering and Technology, Coimbatore" has undergone Winter/Industrial Training at ONGC, Dehradun from 25.01.2024 to 10.02.2024. He/She has successfully completed his/her project work on the topic "Unusual Situation in Well Killing". During the training, he/she took keen interest in completing the assigned work.

We wish him/her all the success in his/her academic endeavors and in life.

Date:
10.02.2024

In Charge
Students Academic Intensive Learning

Winner of Golden Peacock National Training Award 2005, 2006 & 2014 Winner of ISTD Award 2008 & 2013

ओएनजीसी
ONGC

ऑयल एण्ड नेचुरल गैस कारपोरेशन लिमिटेड
Oil and Natural Gas Corporation Limited
ओएनजीसी अकादमी, देहरादून
ONGC Academy, Dehra Dun
ISO 9001 : 2015 Certified

Training Completion Certificate

This is to certify that Mr./Ms. Mark sandler.X a student of "JCT College of Engineering and Technology, Coimbatore" has undergone Winter/Industrial Training at ONGC, Dehradun from 10-01-2024 to 25-01-2024. He/She has successfully completed his/her project work on the topic "Unusual Situation in Well Killing". During the training, he/she took keen interest in completing the assigned work.

We wish him/her all the success in his/her academic endeavors and in life.

DATE: 25-01-2024

In Charge
Students Academic Intensive Learning

Winner of Golden Peacock National Training Award 2005, 2006 & 2014 Winner of ISTD Award 2008 & 2013

ओएनजीसी
ONGC

ऑयल एण्ड नेचुरल गैस कारपोरेशन लिमिटेड
Oil and Natural Gas Corporation Limited
ओएनजीसी अकादमी, देहरादून
ONGC Academy, Dehra Dun
ISO 9001 : 2015 Certified

Training Completion Certificate

This is to certify that Mr./Ms. AKASH.K.R a student of "JCT College of Engineering and Technology, Coimbatore" has undergone Winter/Industrial Training at ONGC, Dehradun from 10-01-2024 to 25-01-2024. He/She has successfully completed his/her project work on the topic "Unusual Situation in Well Killing". During the training, he/she took keen interest in completing the assigned work.

We wish him/her all the success in his/her academic endeavors and in life.

DATE: 25-01-2024

In Charge
Students Academic Intensive Learning

Winner of Golden Peacock National Training Award 2005, 2006 & 2014 Winner of ISTD Award 2008 & 2013

ओएनजीसी
ONGC

ऑयल एण्ड नेचुरल गैस कारपोरेशन लिमिटेड
Oil and Natural Gas Corporation Limited
ओएनजीसी अकादमी, देहरादून
ONGC Academy, Dehra Dun
ISO 9001 : 2015 Certified

Training Completion Certificate

This is to certify that Mr./Ms. C.GURU HARISH RAJA a student of "JCT College of Engineering and Technology, Coimbatore" has undergone Winter/Industrial Training at ONGC, Dehradun from 10.01.2024 to 25.01.2024. He/She has successfully completed his/her project work on the topic "Unusual Situation in Well Killing". During the training, he/she took keen interest in completing the assigned work.

We wish him/her all the success in his/her academic endeavors and in life.

Date: 25.01.2024

In Charge
Students Academic Intensive Learning

Winner of Golden Peacock National Training Award 2005, 2006 & 2014 Winner of ISTD Award 2008 & 2013

ओएनजीसी
ONGC

ऑयल एण्ड नेचुरल गैस कारपोरेशन लिमिटेड
Oil and Natural Gas Corporation Limited
ओएनजीसी अकादमी, देहरादून
ONGC Academy, Dehra Dun
ISO 9001 : 2015 Certified

Training Completion Certificate

This is to certify that Mr./Ms. IEJAS AHMED K.M a student of "JCT College of Engineering and Technology, Coimbatore" has undergone Winter/Industrial Training at ONGC, Dehradun from 10.01.2024 to 25.01.2024. He/She has successfully completed his/her project work on the topic "Unusual Situation in Well Killing". During the training, he/she took keen interest in completing the assigned work.

We wish him/her all the success in his/her academic endeavors and in life.

Date:
25.01.2024

In Charge
Students Academic Intensive Learning

Winner of Golden Peacock National Training Award 2005, 2006 & 2014 Winner of ISTD Award 2008 & 2013

ओएनजीसी
ONGC

ऑयल एण्ड नेचुरल गैस कारपोरेशन लिमिटेड
Oil and Natural Gas Corporation Limited
ओएनजीसी अकादमी, देहरादून
ONGC Academy, Dehra Dun
ISO 9001 : 2015 Certified

Training Completion Certificate

This is to certify that Mr./Ms. N.VEERAMANI a student of "JCT College of Engineering and Technology, Coimbatore" has undergone Winter/Industrial Training at ONGC, Dehradun from 25.01.2024 to 10.02.2024. He/She has successfully completed his/her project work on the topic "Unusual Situation in Well Killing". During the training, he/she took keen interest in completing the assigned work.

We wish him/her all the success in his/her academic endeavors and in life.

Date: 10.2.2024

In Charge
Students Academic Intensive Learning

Winner of Golden Peacock National Training Award 2005, 2006 & 2014 Winner of ISTD Award 2008 & 2013

ओएनजीसी
ONGC

ऑयल एण्ड नेचुरल गैस कारपोरेशन लिमिटेड
Oil and Natural Gas Corporation Limited
ओएनजीसी अकादमी, देहरादून
ONGC Academy, Dehra Dun
ISO 9001 : 2015 Certified

Training Completion Certificate

This is to certify that Mr./Ms.ADITHYAN K S a student of " JCT College of Engineering and Technology, Coimbatore" has undergone Winter/Industrial Training at ONGC, Dehradun from 10.01.2024 to 25.01.2024. He/She has successfully completed his/her project work on the topic " Unusual Situation in Well Killing" . During the training, he/she took keen interest in completing the assigned work.We wish him/her all the success in his/her academic endeavors and in life.

Date: 25.01.2024

In Charge
Students Academic Intensive Learning

Winner of Golden Peacock National Training Award 2005, 2006 & 2014 Winner of ISTD Award 2008 & 2013

ओएनजीसी
ONGC

ऑयल एण्ड नेचुरल गैस कारपोरेशन लिमिटेड
Oil and Natural Gas Corporation Limited
ओएनजीसी अकादमी, देहरादून
ONGC Academy, Dehra Dun
ISO 9001 : 2015 Certified

Training Completion Certificate

This is to certify that Mr./Ms.M.GOWSICK a student of " JCT College of Engineering and Technology, Coimbatore" has undergone Winter/Industrial Training at ONGC, Dehradun from 10.01.2024 to 25.01.2024. He/She has successfully completed his/her project work on the topic " Unusual Situation in Well Killing" . During the training, he/she took keen interest in completing the assigned work.

We wish him/her all the success in his/her academic endeavors and in life.

Date: 25.01.2024

In Charge
Students Academic Intensive Learning

Winner of Golden Peacock National Training Award 2005, 2006 & 2014 Winner of ISTD Award 2008 & 2013

ओएनजीसी
ONGC

ऑयल एण्ड नेचुरल गैस कारपोरेशन लिमिटेड
Oil and Natural Gas Corporation Limited
ओएनजीसी अकादमी, देहरादून
ONGC Academy, Dehra Dun
ISO 9001 : 2015 Certified

Training Completion Certificate

This is to certify that Mr./Ms.SREENATH. T. K a student of " JCT College of Engineering and Technology, Coimbatore" has undergone Winter/Industrial Training at ONGC, Dehradun from 25.01.2024 to 10.02.2024. He/She has successfully completed his/her project work on the topic " Unusual Situation in Well Killing" . During the training, he/she took keen interest in completing the assigned work. We wish him/her all the success in his/her academic endeavors and in life.

Date: 10.02.2024

In Charge
Students Academic Intensive Learning

Winner of Golden Peacock National Training Award 2005, 2006 & 2014 Winner of ISTD Award 2008 & 2013

ओएनजीसी
ONGC

ऑयल एण्ड नेचुरल गैस कारपोरेशन लिमिटेड
Oil and Natural Gas Corporation Limited
ओएनजीसी अकादमी, देहरादून
ONGC Academy, Dehra Dun
ISO 9001 : 2015 Certified

Training Completion Certificate

This is to certify that Mr./Ms.A.JEBASTIN a student of " JCT College of Engineering and Technology, Coimbatore" has undergone Winter/Industrial Training at ONGC, Dehradun from 10.01.2024 to 25.01.2024. He/She has successfully completed his/her project work on the topic " Unusual Situation in Well Killing" . During the training, he/she took keen interest in completing the assigned work.

We wish him/her all the success in his/her academic endeavors and in life.

Date: 25.01.2024

In Charge
Students Academic Intensive Learning

Winner of Golden Peacock National Training Award 2005, 2006 & 2014 Winner of ISTD Award 2008 & 2013

ओएनजीसी
ONGC

ऑयल एण्ड नेचुरल गैस कारपोरेशन लिमिटेड
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ओएनजीसी अकादमी, देहरादून
ONGC Academy, Dehra Dun
ISO 9001 : 2015 Certified

Training Completion Certificate

This is to certify that Mr./Ms.A.ASIF KHAN a student of " JCT College of Engineering and Technology, Coimbatore" has undergone Winter/Industrial Training at ONGC, Dehradun from 10.01.2024 to 25.01.2024. He/She has successfully completed his/her project work on the topic " Unusual Situation in Well Killing" . During the training, he/she took keen interest in completing the assigned work.

We wish him/her all the success in his/her academic endeavors and in life.

Date: 25.01.2024

In Charge
Students Academic Intensive Learning

Winner of Golden Peacock National Training Award 2005, 2006 & 2014 Winner of ISTD Award 2008 & 2013

ऑयल एण्ड नेचुरल गैस कारपोरेशन लिमिटेड
Oil and Natural Gas Corporation Limited
ओएनजीसी अकादमी, देहरादून
ONGC Academy, Dehra Dun
ISO 9001 : 2015 Certified

Training Completion Certificate

0This is to certify that Mr./Ms. S. Sathees kumar a student of " JCT College of Engineering and Technology, Coimbatore" has undergone Winter/Industrial Training at ONGC, Dehradun from 25.01.2024 to 10.02.2024. He/She has successfully completed his/her project work on the topic " Unusual Situation in Well Killing" . During the training, he/she took keen interest in completing the assigned work. We wish him/her all the success in his/her academic endeavors and in life.

Date: 10.2.2024

In Charge
Students Academic Intensive Learning

Winner of Golden Peacock National Training Award 2005, 2006 & 2014 Winner of ISTD Award 2008 & 2013

ओएनजीसी

ONGC

ऑयल एण्ड नेचुरल गैस कारपोरेशन लिमिटेड
Oil and Natural Gas Corporation Limited
ओएनजीसी अकादमी, देहरादून
ONGC Academy, Dehra Dun
ISO 9001 : 2015 Certified

Training Completion Certificate

This is to certify that Mr./Ms.Anton Akash a student of " JCT College of Engineering and Technology, Coimbatore" has undergone Winter/Industrial Training at ONGC, Dehradun from 10.01.2024 to 25.01.2024. He/She has successfully completed his/her project work on the topic " Unusual Situation in Well Killing" . During the training, he/she took keen interest in completing the assigned work.

We wish him/her all the success in his/her academic endeavors and in life.

Date: 25.01.2024

In Charge
Students Academic Intensive Learning

Winner of Golden Peacock National Training Award 2005, 2006 & 2014 Winner of ISTD Award 2008 & 2013

ओएनजीसी
ONGC

ऑयल एण्ड नेचुरल गैस कारपोरेशन लिमिटेड
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ONGC Academy, Dehra Dun
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Training Completion Certificate

This is to certify that Mr./Ms Sanchipatla Bhadrinath. a student of " JCT College of Engineering and Technology, Coimbatore" has undergone Winter/Industrial Training at ONGC, Dehradun from 25.01.2024 to 10.02.2024. He/She has successfully completed his/her project work on the topic " Unusual Situation in Well Killing" . During the training, he/she took keen interest in completing the assigned work.

We wish him/her all the success in his/her academic endeavors and in life.

In Charge
Students Academic Intensive Learning

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Date: 10.2.2024

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This is to certify that Mr./Ms A. SRI GANAPATHY SUBRA MANYAN a student of " JCT College of Engineering and Technology, Coimbatore" has undergone Winter/Industrial Training at ONGC, Dehradun from 25.01.2024 to 10.02.2024. He/She has successfully completed his/her project work on the topic " Unusual Situation in Well Killing" . During the training, he/she took keen interest in completing the assigned work.

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We wish him/her all the success in his/her academic endeavors and in life.

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We wish him/her all the success in his/her academic endeavors and in life.

Date: 10.02.2024

In Charge
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Date: 25.01.2024

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Date: 10.02.2024

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This is to certify that Mr./Ms.S.RAJAPANDIYAN a student of " JCT College of Engineering and Technology, Coimbatore" has undergone Winter/Industrial Training at ONGC, Dehradun from 25.01.2024 to 10.02.2024. He/She has successfully completed his/her project work on the topic " Unusual Situation in Well Killing" . During the training, he/she took keen interest in completing the assigned work. We wish him/her all the success in his/her academic endeavors and in life.

Date: 10.02.2024

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Date: 25.01.2024

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Date: 25.01.2024

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This is to certify that Mr./Ms.Mohammed Rinshad a student of " JCT College of Engineering and Technology, Coimbatore" has undergone Winter/Industrial Training at ONGC, Dehradun from 10.01.2024 to 25.01.2024. He/She has successfully completed his/her project work on the topic " Unusual Situation in Well Killing" . During the training, he/she took keen interest in completing the assigned work. We wish him/her all the success in his/her academic endeavors and in life.

Date: 25.01.2024

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This is to certify that Mr./Ms. C Jhishnu a student of "JCT College of Engineering and Technology, Coimbatore" has undergone Winter/Industrial Training at ONGC, Dehradun from 10.01.2024 to 25.01.2024. He/She has successfully completed his/her project work on the topic "Unusual Situation in Well Killing". During the training, he/she took keen interest in completing the assigned work. We wish him/her all the success in his/her academic endeavors and in life.

Date: 25.01.2024

In Charge
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ACHIEVING ZERO LIQUID DISCHARGE AND PROCESS FINE-TUNING IN EXISTING WATER TREATMENT INFRASTRUCTURE

PROJECT REPORT

Submitted by

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SELVA. G	**720920139024**
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In partial fulfilment for the award of the degree of

BACHELOR OF ENGINEERING

IN

PETROCHEMICAL ENGINEERING

JCT COLLEGE OF ENGINEERING AND TECHNOLOGY

COIMBATORE: 641105

ANNA UNIVERSITY: CHENNAI 600 025

MAY: 2024

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BONAFIDE CERTIFICATE

Certified that this project report **"ACHIEVING ZERO LIQUID DISCHARGE AND PROCESS FINE-TUNING IN EXISTING WATER TREATMENT INFRASTRUCTURE"** is the bonafide work of **"ARULGNANI.K (720920139006), MADHESHWARAN.KP (720920139015), SELVA.G (720920139024), SUBASH.C (720920139026)"** who carried out the project work under my supervision.

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Submitted for the Anna University Examination held on..10.05.2024....

INTERNAL EXAMINER

EXTERNAL EXAMINER

ABSTRACT

The aim of this project is to enhance the efficiency and sustainability of existing water treatment infrastructure by achieving Zero Liquid Discharge (ZLD) while optimizing the purification process. The project focuses on addressing the challenge of low Total Dissolved Solids (TDS) levels from Reverse Osmosis (RO) treatment coupled with high feed rates, which can impact the effectiveness of subsequent evaporation stages. To overcome this issue, an additional stage of RO vessel is integrated into the system to increase the reject TDS level, thereby improving the efficiency of multiple evaporators. By implementing this solution, the project aims to achieve ZLD by minimizing wastewater discharge while ensuring the maintenance of water quality standards. Additionally, the project seeks to fine-tune the water treatment process to optimize performance and reduce operational costs.

Key words: Integrate RO stage, design calculation of RO stage, enhance RO reject TDS concentration.

Chapter 7

7. CONCLUSION:

The design of a reverse osmosis system is a highly effective and widely used method for water purification and desalination. Reverse osmosis technology offers numerous advantages, including high water recovery rates, excellent removal of contaminants, and energy efficiency. The design considerations for a reverse osmosis system should include factors such as membrane selection, pre-treatment requirements, system capacity, pressure requirements, and overall system efficiency. By carefully considering these factors and implementing appropriate design measures, reverse osmosis systems can provide reliable and cost-effective solutions for producing clean and potable water.

The concentrate or reject stream in reverse osmosis (RO) plays a crucial role in the operation of a multi-effect evaporator (MEE) system. Here are the key reasons for the importance of concentrate/reject in the context of an RO-MEE system:

1. Solids Concentration: Reverse osmosis removes a significant portion of dissolved solids from the feedwater, resulting in a concentrated reject stream. This concentrate contains the bulk of the dissolved solids that were initially present in the feedwater. By feeding this concentrate to the multi-effect evaporator, the MEE system can further concentrate the solids through evaporation.

2. Energy Efficiency: The concentrate from the reverse osmosis process has a higher temperature compared to the feedwater due to the energy input required for RO separation. By utilizing the reject stream as a feed to the MEE, the system can take advantage of the elevated temperature, reducing the energy requirements for evaporation and overall improving the energy efficiency of the MEE system.

3. Water Recovery: Multi-effect evaporators are designed to recover water from the feed stream. By using the concentrate from the RO process as a feed to the MEE,

the system maximizes water recovery. The reject stream, which would otherwise be considered wastewater, is effectively utilized in the MEE system to extract additional water, reducing overall water consumption and minimizing environmental impact.

4. Solids Management: The concentrate from the reverse osmosis process contains concentrated solids. By directing this stream to the multi-effect evaporator, the MEE system provides an efficient means of managing these solids. As the concentrate is further concentrated through evaporation, the solid content increases, making it easier to handle and dispose of, typically as a concentrated brine or slurry.

5. Product Quality: RO systems are often employed as a pretreatment step to remove impurities, including dissolved solids, from the feedwater. By effectively concentrating the reject stream through the MEE system, the overall product quality can be improved. The MEE system further removes water, resulting in a higher concentration of desired products or a cleaner water stream for reuse.

In summary, the concentrate or reject stream from the reverse osmosis process is vital for the efficient operation of a multi-effect evaporator system. Enables further concentration of dissolved solids, improves energy efficiency, maximizes water recovery, facilitates solids management, and enhances the overall product quality.

SYNERGETIC EFFECT OF SOLID LUBRICANTON TRIBOLOGICAL PROPERTIES OF HDPE NANO COMPOSITES

A PROJECT REPORT

Submitted by

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MAY 2024

BONAFIDE CERTIFICATE

Certified that this project report **"SYNERGETIC EFFECT OF SOLID LUBRICANT ON TRIBOLOGICAL PROPERTIES OF HDPE NANO COMPOSITES"** is the bonafide work of **"AROCKIA ARUL CHANDRU.S (720920139005), RAGAVENDRAN.K (720920139303), SASI KUMAR.R (720920139307)** and **ARULSELVAN.S (720920139007)"** Who carried out the project work under my supervisions.

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Submitted for the project report viva-voce examination held on 10-05-2024

INTERNAL EXAMINAR

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CERTIFICATE

This is to certify that the work contained in the thesis entitled "**SYNERGETIC EFFECT OF SOLID LUBRICANT ON TRIBOLOGICAL PROPERTIES OF HDPE NANO COMPOSITES**" has been carried out by **Mr. Arockia Arul Chandru (720920139005), Mr. Arul Selvan (720920139007), Mr. Ragavendran (720920139303),** and **Mr. Sasi Kumar (720920139307)** student of

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during February to March 2024, under my supervision, in partial fulfilment of the requirements for the degree of

Bachelor of Engineering in

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No part of the work in this thesis is reported or presented for the award of any degree from any other institution

LIBIN ROBERTS
Project Guide
CIPET – PALAKKAD

Place: Palakkad

ABSTRACT

Engineering industries have started using polymers due to their unique properties like lightweight, good corrosion resistance, poor heat & electrical conductivity, and ease of processing. HDPE is used as the matrix for polymer composite due to its excellent mechanical and high temperature withstanding properties. HDPE composites reinforced with Nano zirconia and h-BN particles are to be prepared using melt compounding process. Polymer matrix and the reinforcing particles are to be extruded using twin screw extruder and then the extruded pellets are to be injection molded into required shapes for mechanical and thermal testing.

Tribological behavior of the fabricated composites is to be determined using pin-on-disc tribometer according to ASTM G99 standards. Wear mechanism map is to plot to identify the loading condition at which different wear mechanism takes place.

CHAPTER 5

CONCLUSION

1. The objective of the current study is to evaluate the effect of contact pressure on wear performance of HDPE reinforced withHDPE/ZrO_2/HBN nano composite. A direct relationship is drawn between contact pressures and wears volume of the composites and the hybrids.

2. Wear increases with increase in sliding velocity, whereas addition of Nano zirconia and boron nitride reduces wear considerably.

3. Addition of Nano zirconia reduces wear significantly due to interfacial adhesion.

4. COF reduces with increase in sliding velocity due to formation of transfer film at higher velocity due to which polymer contact becomes lesser.

5. Addition of boron nitride has positive influence on both wear and COF due to film forming ability and also due to hard nature.

6. It can be concluded that HDPE/ZrO_2/HBN hybrid nanofillers system exhibited superior performance while evaluating contact pressure, wear volume, mechanisms and plastic flow.

GREEN SYNTHESIS OF Fe DOPED ZnO NANOPARTICLES FROM HIBISCUS ROSA SINENSIS FOR PHOTOCATALYTIC DYE DEGRADATION

PROJECT REPORT

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In a partial fulfilment for the award of the degree

of

BACHELOR OF ENGINEERING

IN

PETROCHEMICAL ENGINEERING

JCT COLLEGE OF ENGINEERING & TECHNOLOGY,

COIMBATORE – 641 105.

ANNA UNIVERSITY: CHENNAI 600 025

MAY:2024

BONAFIDE CERTIFICATE

Certified that this project report **"GREEN SYNTHESIS OF Fe DOPED ZnO NANOPARTICLES FROM HIBISCUS ROSA SINENSIS FOR PHOTOCATALYTIC DYE DEGRADAION"** is the bonafide work of **"AJAY.B– (7209201139001), DALVIN.R (720920139011), SANTHOSHKUMAR.M (720920139022), VALANARASU.V (720920139030)"** Who carried out the project under my supervision.

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INTERNAL EXAMINAR

EXTERNAL EXAMINER

ABSTRACT

Fe-doped ZnO nanoparticles (NPs) with different Fe contents (0.1–5.0 wt%) were prepared using extract of Hibiscus Rosa Sinensis growing in Coimbatore, Tamil Nadu. The biosynthesized NPs were characterized by Fourier transform infrared spectroscopy, X-ray diffraction, Scanning Electron Microscopy, UV Vis Spectroscopy. Characterization results showed that undoped ZnO and Fe-doped ZnO powders were crystallized. The photocatalytic activity of the Fe-doped ZnO nanoparticles was evaluated by studying the degradation of organic dyes under UV light irradiation. The results demonstrate the effectiveness of the synthesized nanoparticles as a photocatalyst for dye degradation, highlighting their potential for environmental remediation applications. Doping has a pronounced effect on the physical and optical properties. Indeed, the size of the crystallites, the energy of the bandgap as well as the intensity of the PL emission decreased with the Fe content. Photocatalytic tests revealed that the doped samples degraded methyl orange (MO) more efficiently than pure ZnO. Moreover, the photocatalytic activity improved with increasing Fe content. The best photocatalyst (Fe-ZnO) was found degrading MO by 92.1%, at 60 min.

CHAPTER – 5

CONCLUSIONS

This study successfully reported an unprecedented environment-friendly bio mechanochemical approach for the synthesis of Fe doped ZnO NPs, using an aqueous extract from the Hibiscus Rosa Sinensis. The bio components present in leaves were used as stabilizing and reducing agents. XRD analysis identified a monoclinic Fe doped ZnO phase with a crystallite size of 12.44 nm. Photoluminescence spectra identified two separate bands at 421 nm and 597 nm, indicating the presence of oxygen vacancies within the Fe doped ZnO NPs, which improved the photocatalytic activity. The synthesized nanosized material effectively demonstrated catalytic activity under UV light illumination to degrade MG and MO dyes. The photocatalytic reduction followed a pseudo-first-order kinetics, removes both MG and MO dyes. These promising results offered a new means for researchers to produce cost-effective and environmentally friendly photocatalysts to efficiently remove dyes from water.

DEVELOP AN ORGANIC DYE FROM BASELLA ALBA AND MANGO LEAVES FOR DYEING OF SILK FABRIC

A PROJECT REPORT

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INTERNAL EXAMINER

EXTERNAL EXAMINER

ABSTRACT

Nowadays, synthesis dyes release vast amount of waste and unfixed colorant poses serious health hazard and are disturbing the eco – balance of thenature. Environmental issues in the production and applications of synthetic dyes once again revived consumer interest natural dyes during the last decades of the twentieth century. But the problem associated in dyeing with natural dyesare lower extraction of natural colorants and poor fastness but using metallic salts as mordant which traditionally used to improve fastness and produce shade which is hygienic. Mango leaves and Basella alba is used is this thesis as natural dyes mango leaves contains various compounds such as chlorophyll, flavonoids, carotenoids That are responsible for yellow color and Basella alba chlorophyll, anthocyanins, carotenoids, are responsible for the pink color It is a substantive dye capable of direct dyeing silk. As fabric production rate is very tremendous and the market limited and scope which can be multiplied by value add finishing to textiles. This new line of interest is due to stringent environmental standards imposed by many countries due to the usage of synthetic dyes which causes allergic reaction and toxicity. In this project we are going to analyzing those dyes after dyeing them in a silk fabric using alum as a mordant. After testing to color fastness, color rubbing, Delta E, we came to result of the best dyeing opinion for silk fabric

CHAPTER 5

CONCLUSION

5.1 Conclusion

As it is expressed earlier that the adverse effect on environment due to synthetic dying and chemical finishing have is very much huge. So, there is no exception without replacing these harmful chemicals with natural components. In this research it is shown that mango leaves and Basella alba used as natural dye. It is known that these are totally harmless for the environment as well as human body. This type of operation can be carried out in various field (e.g. medical clothing, sportswear, home textiles etc.). With further research it may be possible to apply these eco-friendly and hygienic materials in other fields.

5.2 Future development

He works should be extended with various recipe at fixed temperature. Different types of fabrics should have brought under this process. Finding a way to reduce the time of this process is also possibility of development. As environmental concerns grow, there will be increased emphasis on developing sustainable methods for sourcing and producing natural dyes. This could involve exploring new plant sources, improving cultivation techniques, and reducing water and energy consumption in the dyeing process. Enhancing the colour stability of natural dyes is essential for their wider adoption in industries such as textiles and cosmetics. Research may focus on optimizing dye extraction and purification methods to achieve more consistent and long-lasting colours. Innovations in dyeing technology, such as the use of enzymatic processes or nanotechnology, may enable more efficient and environmentally friendly application of natural dyes onto various materials. This could lead to the development of new dyeing techniques that minimize water and chemical usage.

DESIGN AND MANUFACTURE OF ACETALDEHYDE FOR A CAPACITY OF 100TPD

PROJECT REPORT

Submitted by

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MAY-2024

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INTERNAL EXAMINAR

EXTERNAL EXAMINER

Abstract

This project focuses on the design and manufacture of an acetaldehyde plant with a production capacity of 100 metric tons per day (TPD). Acetaldehyde is crucial intermediate chemical used in various industries, including pharmaceuticals, plastics, and food additives. The project entails comprehensive engineering design, procurement of necessary equipment, construction, and commissioning of the plant. Key considerations include process optimization, energy efficiency, safety protocols, and environmental sustainability. The project aims to meet stringent quality standards while ensuring cost-effectiveness and adherence to timelines. Additionally, it emphasizes the integration of advanced technologies to enhance productivity and minimize environmental impact. The successful implementation of this project will contribute to meeting the growing demand for acetaldehyde while fostering innovation and sustainable industrial development . Furthermore, the project will encompass a detailed feasibility study, including market analysis, financial projections, and risk assessment, to ensure its viability and long-term success. Collaboration with stakeholders, including suppliers, regulatory authorities, and local communities, will be vital to address potential challenges and foster a collaborative approach to sustainable development. Through knowledge sharing and capacity building, the project will not only deliver tangible economic benefits but also contribute to the advancement of the chemical industry and support the transition towards a greener, more resilient future.

CHAPTER 7

CONCLUSION

From the above report we have designed the a plant for production of acetaldehyde from oxidation of ethanol for a capacity of 100TPD without any given data and by using the references and the literature survey and the values from the perry hand book we were able to design a complete plant. The cost estimation ROI period of the investment can be carried out in the future studies

MECHANICAL PROPERTIES OF HIGH-DENSITY POLYETHYLENE (HDPE) COMPOSITES REINFORCED WITH NANO ZIRCONIA AND HEXAGONAL BORON NITRIDE (H- BN)

A PROJECT REPORT

Submitted by

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BOOBALAN R	**(720920139009)**
RAMKUMAR R	**(720920139020)**
MANOJ A	**(720920139016)**

In a partial fulfillment for the award of the degree

Of

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MAY 2024

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Ref: CIPET/Palakkad/Trg/2023-24/01 **25/03/2024**

CERTIFICATE

This is to certify that the work contained in the thesis entitled **"MECHANICAL PROPERTIES OF HDPE COMPOSITES REINFORCED WITH NANO ZIRCONIA AND H-BN"** has been carried out by **Ms. Mamatha C M** (720920139010), **Mr. Boobalan R** (720920139009), **Mr. Ramkumar R** (720920139020), **Mr. Manoj A** (720920139016) student of

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during February to March 2024, under my supervision, in partial fulfilment of the requirements for the degree of

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No part of the work in this thesis is reported or presented for the award of any degree from any other institution.

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Project Guide
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ABSTRACT

Engineering industries have started using polymers due to their unique properties like lightweight, good corrosion resistance, poor heat & electrical conductivity, and ease of processing. HDPE is used as the matrix for polymer composite due to its excellent mechanical and high temperature withstanding properties. HDPE composites reinforced with Nano zirconia and h-BN particles are to be prepared using melt compounding process. Polymer matrix and the reinforcing particles are to be extruded using twin screw extruder and then the extruded pellets are to be injection molded into required shapes for mechanical and thermal testing. Mechanical properties of the prepared composite specimens are to be determined through tensile test, impact test and shore hardness test. Theoretical models have been developed for predicting the tensile behavior of the composites to identify the interface adhesion between polymer and the reinforcing particles.

KEYWORDS: HDPE, Nano Zirconia, H-BN, Twin Screw Extruder.

01	Literature review.	PO1,PO2,PSO1,PSO2
02	Problem Identification.	PO1,PO2,PO3,PO4,PO6,PSO1,PSO2
03	Modern Tools Usage.	PO5,PO12,PSO2
04	To prepare Project Report.	PO8,PO9
05	Project Reviews to be attended.	PO9,PO10,PSO2

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CONCLUSION

The incorporation of nano zirconia (nZrO2) and hexagonal boron nitride (h-BN) into high-density polyethylene (HDPE) using a twin-screw extruder and subsequent injection molding has significantly improved the material's mechanical properties, making it a viable candidate for piping system applications. The enhanced tensile strength, impact strength, and hardness observed in the composite samples can be attributed to the effective dispersion of nanofillers and the strong interfacial bonding within the HDPE matrix. This reinforcement strategy not only contributes to the robustness of HDPE but also extends its application potential in areas requiring high durability and mechanical integrity. The findings from this study underscore the importance of processing techniques in optimizing the performance characteristics of polymer composites and highlight the promising future of nano-enhanced polymeric materials in industrial applications. Future research may focus on the long-term performance of these composites under real-world conditions to validate their effectiveness and durability in operational piping systems.

2024.09.19 15:01

STUDY OF HYDROGENATION SECTION IN CYCLOHEXANONE PLANT

PROJECT REPORT

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INTERNAL EXAMINAR

EXTERNAL EXAMINER

2024.09.19 15:02

ABSTRACT

This study focusses on the optimization of the hydrogenation section within a cyclohexane plant the process involves several key stages, including hydrogenation, oxidation, purification and dehydrogenation. A comprehensive investigation is presented, biggening with an review explores relevant information on hydrogenation process and cyclohexanone. The process description delves into the intricacies of hydrogenation, oxidation, purification, and dehydrogenation providing a detailed overview of each stage. The subsequent sections cover mass and energy balance essential component for understanding and enhancing the overall process efficiency. Mass balance for hydrogenation, oxidation and dehydrogenation are meticulously examined, followed by energy balance for the hydrogenation and dehydrogenation stages. The study further delves into equipment design with a specific focus on the distillation column an condenser. A cost analysis and a effective idea is proposed for effectively reducing the usage of ammonia for cooling purposes.

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CHAPTER 7

CONCLUSION

In conclusion, the optimization of flowrates within the hydrogenation section of the cyclohexanone plant, as conducted through Aspen Plus simulation, proves to be a pivotal aspect of enhancing overall process efficiency. This study has systematically delved into various stages of the cyclohexanone production process, emphasizing the significance of optimization efforts in achieving improved performance. The literature review provided a foundation by exploring pertinent information on hydrogenation processes and Cyclohexanone, setting the stage for the comprehensive investigation. The detailed process description covered hydrogenation, oxidation, purification, and dehydrogenation, shedding light on the intricacies of each stage. Mass and energy balances were meticulously examined, offering insights into crucial components for understanding and enhancing overall efficiency. The focus on mass balances form hydrogenation, oxidation, and dehydrogenation, along with energy balances for hydrogenation and dehydrogenation, allowed for a comprehensive understanding of the process dynamics. Equipment design considerations, particularly the distillation column and condenser, were highlighted to ensure the optimized flowrates were effectively implemented.

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