SRI KRISHNADEVARAYA EDUCATIONAL TRUST'S
SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGY
Krishnadevarayanagar, Hunasamaranahalli, Off International Airport Road, Bangalore-562 157
(Affiliated to Visvesvaraya technological university, recognised by AICTE& Accredited by National Board of Accreditation, New Delhi. An ISO 9001:2008 Certified Institution.)
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DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

LIST OF APPROVED FINAL YEAR PROJECTS

ACADEMIC YEAR 2022-23

Sl. No	USN	Name of the Students	Title of the project	Group No
1	1MV19EE015	AMRUTHA G	Arduino Bluetooth control robot with obstacle detection and GPS tracking	G1
2	1MV19EE036	HARINI P		
3	1MV19EE037	HARISH C		
4	1MV19EE049	M SMRITI		
5	1MV19EE020	ANUSHA L	All time medicine assistant at public places	G2
6	1MV19EE064	NIVEDITHA B S		
7	1MV19EE089	SINDHU T		
8	1MV19EE094	SOWMYASHREE K		
9	1MV19EE008	ADITHYA DEEKSHITH	IoT based home automation using node MCU	G3
10	1MV19EE033	DADI JASHWANTH KUMAR		
11	1MV19EE039	HARSHIT AGNIHOTRI		
12	1MV19EE055	MOHAMMED ARHAAN PASHA		
13	1MV19EE061	NAVEEN A MURALE	Vehicle accident detection using GPS and GSM	G4
14	1MV19EE066	PRAMOD M		
15	1MV19EE078	ROHAN YOGESH GOWDAR		
16	1MV19EE083	SANGAMESH JUNTPALLY		
17	1MV19EE065	PANKAJ A CHAVAN	Underground line fault detection	G5
18	1MV19EE071	PRUTHVIRAJ B GOUDAR		
19	1MV19EE106	VILAS		
20	1MV20EE411	VINAYAKA N M		

21	1MV19EE004	ABHISHEK KUMAR	Fault detection and correction in DC motors	G6
22	1MV19EE034	DEEPAK KUMAR		
23	1MV19EE092	SOUMICK MAJUMDAR		
24	1MV19EE098	SURAJ KUMAR		
25	1MV19EE056	MOHD JUNAID	Real time bus tracking system using IoT	G7
26	1MV19EE068	PRASHANTH NOOLVI		
27	1MV19EE074	RAHUL N M		
28	1MV19EE084	SATHISH G K		
29	1MV19EE041	ISHA ASTHANA	Design of an unmanned aerial vehicle to analyse agricultural soil and water spraying	G8
30	1MV19EE043	KAUSHIKI		
31	1MV19EE076	RIYANSHA DANGI		
32	1MV19EE099	SUYESHA BATTACHARJEE		
33	1MV19EE038	HARSH PRAKASH	A smart helmet based on IoT for safety and accident detection	G9
34	1MV19EE062	NILESH SAHAY		
35	1MV19EE069	PRATYUSH RAJ PANDEY		
36	1MV19EE107	YASHOVARDHAN SINHA		
37	1MV19EE003	ABHISHEK KUMAR	Solar wireless electric vehicle charging system	G10
38	1MV19EE010	ADITYA KUMAR		
39	1MV19EE012	ALI AHMED		
40	1MV19EE013	AMAN KUMAR		
41	1MV19EE001	AAYUSH	Piezo electric energy protection and its utilization for street light automation	G11
42	1MV19EE067	PRANAV KUMAR		
43	1MV19EE081	SAIYMEEN FATIMA		
44	1MV19EE093	SOURA UPADHYAY		
45	1MV19EE011	AGRANI DEEPAK	Automatic railway gate controlling	G12
46	1MV19EE045	KUNAL KUMAR		
47	1MV19EE046	KUSHAGRA DEEPAK		
48	1MV19EE085	SATYAM		
49	1MV19EE044	KUMAR HARSHIT	Field oriented vector controlled BLDC motor	G13
50	1MV19EE048	M ASHUTOSH CHANDRA		
51	1MV19EE059	MUNNA BHARDWAJ		
52	1MV19EE082	SAMARJEET KUMAR SANU		

53	1MV19EE030	BINDHUSHREE L M	Design of smart wearable monitoring system for patients with Alzheimer diseases	G14
54	1MV19EE040	HARSHITHA S REDDY		
55	1MV19EE050	MAHALAKSHMI		
56	1MV19EE052	MANVITHA G S		
57	1MV19EE029	BIBHUTI KUMAR	Wireless black box for cars using sensors and GPS modules	G15
58	1MV19EE058	MRUGANK PANDYA		
59	1MV19EE077	ROHAN KEDIA		
60	1MV19EE088	SIDDHANT KUMAR		
61	1MV19EE007	ADARSH TIWARI	Arduino based multi-mode floor cleaning robot	G16
62	1MV19EE019	ANMOL ANAND		
63	1MV19EE024	ASHUTOSH NAYAK		
64	1MV19EE075	REET GUPTA		
65	1MV19EE028	BANU PRASAD KY	Efficient wireless electric vehicle charging system with RFID protection	G17
66	1MV19EE072	RAHMATH ALI B		
67	1MV20EE404	CHARAN P B		
68	1MV20EE405	DHARNEESH R		
69	1MV19EE053	MANYA JHA	Design of IoT based remote controlled robot with camera for environmental monitoring and real-time surveillance	G18
70	1MV19EE054	MEGHANA V		
71	1MV19EE102	TANYA SINGH		
72	1MV19EE109	ZIKRA RAHMAN		
73	1MV19EE005	ABHISHEK RAJ	Estimation of battery condition for electric vehicle application	G19
74	1MV19EE057	MOHHAMAD AFSER		
75	1MV19EE063	NISHANT SOURAV		
76	1MV19EE104	UJJWAL KUMAR PANDEY		
77	1MV19EE079	ROHITH CH	Smart energy analysing device with theft detection	G20
78	1MV19EE095	SREEJITH C S		
79	1MV19EE100	SYED IRFAN		
80	1MV19EE108	YESHWANTH RAJ		
81	1MV19EE021	ARUN M	chine learning for PCB defect identification	G21
82	1MV19EE023	ASHIV SANJEEV		
83	1MV19EE026	BALAJI S		
84	1MV19EE042	JAYANTH S		

85	1MV19EE027	BALBHIM	IoT based Circuit Breaker	G22
86	1MV19EE031	CHETHANKUMAR S M		
87	1MV19EE035	DILEEP B N		
88	1MV19EE087	SHIVKUMAR		
89	1MV20EE401	AMRUTHA G V	Smart Energy management for EV charging through renewable sources	G23
90	1MV20EE402	ANUPRIYA K V		
91	1MV20EE406	ISHRATH KHUSHBUDA		
92	1MV20EE410	VARUN B BANAKAR		
93	1MV19EE073	RAHUL N	IoT based battery parameter monitoring and control system for electric vehicle	G24
94	1MV19EE097	SUMIT KUMAR RAY		
95	1MV20EE408	SUSHMA R HIREMATH		
96	1MV20EE409	SWAPNA N		
97	1MV20EE400	AKSHATHA K	Three phase transmission line fault alert using Arduino	G25
98	1MV20EE403	CHAITRA C		
99	1MV20EE407	SUNIL R		
100	1MV19EE032	D K SHASHANK	Transmission line using IOT	G26
101	1MV19EE051	MANJUNATHA		
102	1MV19EE070	PRAVEENKUMAR		
103	1MV19EE091	SONAL KUMAR		
104	1MV19EE047	KUSHAL K C	Wireless speed control of single phase induction motor	G27
105	1MV19EE096	SRIKANTH M		
106	1MV19EE103	THARUN G		
107	1MV19EE105	VENU M G		
108	1MV19EE006	ABHISHEK RANJAN JHA	IoT based weather monitoring system	G28
109	1MV19EE014	AMAN SINGH		
110	1MV19EE017	ANANYA AMRIT		
111	1MV19EE025	AVART KASHYAP		
112	1MV19EE002	ABHIJEET ANAND	Unmanned Vehicle	G29
1143	1MV19EE022	ASHISH KUMAR TIWARY		
114	1MV19EE080	SAGNIK CHAKRABORTY		
115	1MV19EE086	SAYAN BID		

116	1MV19EE018	ANKIT PANDEY	Blind people supporting glasses for object detection and recognition induction	G30
117	1MV19EE060	NADEEMUL HAQUE		
118	1MV19EE090	SINGARAYANI L ROYAL		
119	1MV19EE101	TAMMANNA		
120	1MV18EE018	ANKIT RANJAN	Dual axis solar tracking system using IoT	G31
121	1MV18EE026	ASHWINI K PRABHAKAR		
122	1MV18EE089	SANDEEP KUMAR		

PROF. & HEAD
DEPT. OF ELECTRICAL & ELECTRONICS ENGG.
SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGY
Krishnadevarayanagar, Hunasemaranahalli
(Via) Yelahanka, Bengaluru - 562 157

Project Coordinator

VISVESVARAYA TECHNOLOGICAL UNIVERSITY

"Jnana Sangama", Belagavi-590018

Project Report

on

"DESIGN OF A MULTIPURPOSE SPRAYER FOR AGRICULTURAL AND INDUSTRIAL PURPOSE"

submitted in partial fulfillment of the requirements for the award of the Degree of

BACHELOR OF ENGINEERING

IN

ELECTRICAL & ELECTRONICS ENGINEERING

Submitted by

ISHA ASTHANA	**1MV19EE041**
KAUSHIKI	**1MV19EE043**
RIYANSHA DANGI	**1MV19EE076**
SUYESHA BHATTACHARJEE	**1MV19EE099**

Under the Guidance of

Dr. Parthasarathy V.

Associate Professor

Electrical & Electronics Eng. Dept.

Sir M. VIT, Bengaluru.

Department of Electrical & Electronics Engineering

Sir M. VISVESVARAYA INSTITUTE OF TECHNOLOGY

(Approved by AICTE New Delhi, Affiliated to VTU, Belagavi, ISO 9001:2008 Certified)

Off International Airport Road, Krishnadevaraya Nagar, Bengaluru – 562157

2022 – 2023

Sir M. VISVESVARAYA INSTITUTE OF TECHNOLOGY

(Approved by AICTE New Delhi, Affiliated to VTU, Belagavi, ISO 9001:2008 Certified)

off International Airport Road, Krishnadevaraya Nagar, Bengaluru – 562157

Department of Electrical & Electronics Engineering

CERTIFICATE

Certified that the project work entitled "*Design of a Multipurpose Sprayer for Agriculture and Industrial Use*" carried out by **Ms. ISHA ASTHANA (1MV19EE041), Ms. KAUSHIKI (1MV19EE043), Ms. RIYANSHA DANGI (1MV19EE076), Ms. SUYESHA BHATTACHARJEE (1MV19EE099)** , the bonafide students of **Sir M. VISVESVARAYA INSTITUTE OF TECHNOLOGY**, Bengaluru in partial fulfillment for the requirements for the award of the degree of **Bachelor of Engineering in Electrical & Electronics** of the **Visvesvaraya Technological University**, Belagavi during the academic year **2022- 2023**. It is certified that all corrections/suggestions indicated for Internal Assessment have been incorporated in the report deposited in the department library. The Project work has been approved as it satisfies the academic requirements in respect of Project work prescribed for the above- mentioned degree.

Signature of Guide	Signature of HOD	Signature of Principal
Dr. Parthasarathy.V	Dr. Suresh H L	Prof. Rakesh S G
22/05/23	23/5/23	

PRINCIPAL
SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGY
Krishnadevaraya Nagar, Yelahanka
International Airport Road, Bangalore-562 157

EXTERNAL VIVA VOCE

Name of Examiner	Signature with Date
1. Dr M. S. Suresh	23/5/23
2. Manjula. B. K	23/5/23

Sir M. VISVESVARAYA INSTITUTE OF TECHNOLOGY

(Approved by AICTE New Delhi, Affiliated to VTU, Belagavi, ISO 9001:2008 Certified)

Off International Airport Road, Krishnadevaraya Nagar, Bengaluru – 562157

Department of Electrical & Electronics Engineering

DECLARATION

We are hereby declaring that the project work entitled **"Design of a Multipurpose Sprayer for Agriculture and Industrial Use"** carried out by me and submitted in partial fulfillment for the award of **Bachelor of Engineering** in **Electrical & Electronics Engineering** of the **Visvesvaraya Technological University, Belagavi** during the year **2022-2023**. The matter embodied in this project report has not been submitted to any other university or institute for the award of any other degree or diploma.

Place: Bengaluru

22/05/2023

ISHA ASTHANA (1MV19EE041)

KAUSHIKI (1MV19EE043)

RIYANASHA DANGI (1MV19EE076)

SUYESHA BHATTACHARJEE (1MV19EE[illegible])

VISVESVARAYA TECHNOLOGICAL UNIVERSITY
BELAGAVI-590018

PROJECT REPORT ON
"PIEZO ELECTRIC AND SOLAR POWER GENERATION"

Submitted in partial fulfillment of the requirement for the award of the degree of Bachelor of Engineering in Electrical and Electronics Engineering

Submitted by

AADITYA N MUTALIK	(1MV13EE001)
AVANEESH D	(1MV13EE021)
BIBIN SAVIO	(1MV13EE022)
HARSHITH M	(1MV13EE032)

Under the guidance of

Mr. M S Suresh
Associate Professor, I/C Head of the Department
Department of Electrical and Electronics Engineering
Sir MVIT, Bengaluru

Department of Electrical and Electronics Engineering
Sir M Visvesvaraya Institute of Technology, Krishnadevarayanagar,
Hunasamaranahalli, Bengaluru-562157

2017

SIR M VISVESVARAYA INSTITUTE OF TECHNOLOGY

Dept. of Electrical and Electronics Engineering

Hunasamaranahalli, Via-Yelahanka, Bangalore-562157.

CERTIFICATE

This is to certify that the project report entitled "**Piezo Electric And Solar Power Generation**" that is being submitted by **Aaditya N Mutalik (1MV13EE001), Avaneesh D (1MV13EE021), Bibin Savio (1MV13EE022)** and **Harshith M (1MV13EE032)** under the guidance of **Mr. M S Suresh** I/C HOD, in partial fulfillment for the award of the degree of **Bachelor of Engineering in Electrical and Electronics** from the **Visvesvaraya Technological University, Belagavi** during the academic year 2013-2017. It is certified that, the corrections or suggestions indicated for Internal Assessment have been incorporated in the report deposited in the departmental library. The project report has been approved as it satisfies the academic requirements in respect for the project work prescribed for the **Bachelor of Engineering degree.**

Mr. M S Suresh	**Mr. M.S. Suresh**	**Prof. K. R. Kini**
Project Guide	Associate Prof. I/C H.O.D	I/C Principal
Associate professor, I/C H.O.D	Department of EEE	SIR MVIT
Department of EEE, SIR MVIT		
SIR MVIT		

EXTERNAL VIVA

	Name of the external examiners	Signature with date
1)	M.S. Suresh	27/6/17
2)	Dr. A. George	27/06/17

SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGY

(Approved by AICTE New Delhi, Affiliated to VTU, Belagavi, ISO 9001:2008 Certified)

Off International Airport Road, Krishnadevaraya Nagar, Bengaluru – 562157

Department of Electrical & Electronics Engineering

CERTIFICATE

Certified that the project work entitled "HUMAN DETECTION BASED ON IOT USING BLUETOOTH HC-05" carried out by **ABHIJEET ANAND, USN: 1MV19EE002, ASHISH KUMAR TIWARY, USN: 1MV19EE022, SAGNIK CHAKRABORTY, USN: 1MV18EE080, SAYAN BID USN: 1MV19EE086** a bonafide students of **Sir M. VISVESVARAYA INSTITUTE OF TECHNOLOGY, Bengaluru** in partial fulfillment for therequirements for the award of the degree of **Bachelor of Engineering** in **Electrical & Electronics Engineering** of the **Visvesvaraya Technological University,** Belagavi during the year **2022-2023.** It iscertified that all corrections/suggestions indicated for Internal Assessment have been incorporated in thereport deposited in the department library. The project work report has been approved as it satisfies the academic requirements in respect of project work prescribed for the above- mentioned degree.

Signature of Guide	Signature of HOD	Signature of Principal
Dr. M.S. Suresh	Dr. Suresh H L	Prof. Rakesh S. G.

PRINCIPAL
SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGY
Krishnadevaraya Nagar, Off International Airport Road, Bangalore-562 157

EXTERNAL VIVA

Name of Examiners	Signature with Date
1. Dr. SURESH H.L	26/5/23
2. Dr N Ramarao — NRao	26/05/23

VISVESVARAYA TECHNOLOGICAL UNIVERSITY

"Jnana Sangama", Belagavi-590018

Project Report

on

"HUMAN DETECTION BASED ON IOT USING BLUETOOTH HC-05"

submitted in partial fulfillment of the requirements for the award of the degree of

BACHELOR OF ENGINEERING

IN

ELECTRICAL & ELECTRONICS ENGINEERING

Submitted by

ABHIJEET ANAND	**1MV19EE002**
ASHISH KUMAR TIWARY	**1MV19EE022**
SAGNIK CHAKRABORTY	**1MV19EE080**
SAYAN BID	**1MV19EE086**

Under the Guidance of

Dr. M.S. Suresh

Professor

Dept. of Electrical and Electronics Engineering.

SIR MVIT, Bengaluru.

Department of Electrical & Electronics Engineering

Sir M VISVESVARAYA INSTITUTE OF TECHNOLOGY

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2022– 2023

SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGY

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Off International Airport Road, Krishnadevaraya Nagar, Bengaluru-562157

Department of Electrical & Electronics Engineering

DECLARATION

We are hereby declaring that the project work entitled **"HUMAN DETECTION BASED ON IOT USING BLUETOOTH HC-05"** carried out by us and submitted in partial fulfilment for the award of **Bachelor of Engineering in Electrical & Electronics Engineering of the Visvesvaraya Technological University, Belagavi** during the year 2022-2023.The matter embodied in this project work report has not been submitted to any other university or institute for the award of any other degree or diploma.

Place: Bengaluru

Date: 19/05/2023

ABHIJEET ANAND

1MV19EE002

ASHISH KUMAR TIWARY

1MV19EE022

SAGNIK CHAKRABORTY

1MV19EE080

SAYAN

1MV19EE086

VISVESVARAYA TECHNOLOGICAL UNIVERSITY

"Jnana Sangama", Belagavi-590 018

Project Work Report

on

"UNDERGROUND CABLE FAULT DETECTION USING IOT"

submitted in partial fulfillment of the requirements for the award of the Degree of

BACHELOR OF ENGINEERING

IN

ELECTRICAL & ELECTRONICS ENGINEERING

Submitted by

Mr. PANKAJ A CHAVAN	1MV19EE065
Mr. PRUTHVIRAJ B GOUDAR	1MV19EE071
Mr. VILAS	1MV19EE106
Mr. VINAYAKA N M	1MV20EE411

Under the Guidance of

MR. KUMARASWAMY R

Assistant Professor,

Sir. MVIT, Bengaluru.

Department of Electrical & Electronics Engineering

Sir M VISVESVARAYA INSTITUTE OF TECHNOLOGY

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2022 – 2023

Sir M VISVESVARAYA INSTITUTE OF TECHNOLOGY

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Off International Airport Road, Krishnadevaraya Nagar, Bengaluru – 562157

Department of Electrical & Electronics Engineering

CERTIFICATE

Certified that the project work entitled "*UNDERGROUND CABLE FAULT DETECTION USING IOT*" carried out by Mr PANKAJ A CHAVAN (1MVIEE065), Mr PRUTHVIRAJ B GOUDAR (1MV19EE071), Mr. VILAS(1MV19EE106), Mr.VINAYAKA N M (1MV20EE411), bonafide students of Sir M. VISVESVARAYA INSTITUTE OF TECHNOLOGY, Bengaluru in partial fulfillment for the requirements for the award of the degree of Bachelor of Engineering in Electrical & Electronics Engineering of the Visvesvaraya Technological University, Belagavi during the academic year 2022-2023. It is certified that all corrections/suggestions indicated for Internal Assessment have been incorporated in the report deposited in the department library. The Project work report has been approved as it satisfies the academic requirements in respect of project work prescribed for the above-mentioned degree.

Signature of Guide
Mr. Kumaraswamy R

Signature of HOD
Dr. Suresh H L

PRINCIPAL
SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGY
Krishnadevaraya Nagar, International Airport Road, Bangalore-562 157

Signature of Principal
Prof. Rakesh S G

EXTERNAL VIVA

Name of Examiners	Signature with Date
1. Dr. S. Suresh	22/5/23
2. Manjula. B. K	22/5/23

Sir M VISVESVARAYA INSTITUTE OF TECHNOLOGY

(Approved by AICTE New Delhi, Affiliated to VTU, Belagavi, ISO 9001:2008 Certified)

Off International Airport Road, Krishnadevaraya Nagar, Bengaluru – 562157

Department of Electrical & Electronics Engineering

DECLARATION

We are hereby declaring that the project work entitled "**Underground cable fault detection using IOT**" carried out by me and submitted in partial fulfilment for the award of **Bachelor of Engineering in Electrical & Electronics Engineering of the Visvesvaraya Technological University, Belagavi** during the academic year 2022-2023. The matter embodied in this project report has not been submitted to any other university or institute for the award of any other degree or diploma.

Place: Bengaluru

Date: 22/05/2023

PANKAJ A CHAVAN
1MV19EE065

PRUTHVIRAJ B GOLIDAR
1MV19EE071

VILAS
1MV19EE106

VINAYAKA N M
1MV20EE411

VISVESVARAYA TECHNOLOGICAL UNIVERSITY

"Jnana Sangama", Belagavi-590 018

Project Phase-II Report

on

"FAULT DETECTION AND CORRECTION IN DC MOTORS"

submitted in partial fulfillment of the requirements for the award of the Degree of

BACHELOR OF ENGINEERING
IN
ELECTRICAL & ELECTRONICS ENGINEERING

Submitted by

Mr. ABHISHEK KUMAR	1MV19EE004
Mr. DEEPAK KUMAR	1MV19EE034
Mr. SOUMICK MAJUMDAR	1MV19EE092
Mr. SURAJ KUMAR	1MV19EE098

Under the Guidance of

Mr. V. Rajesh Kumar

Assistant Professor

Department of Electrical & Electronics Engineering

Sir M VISVESVARAYA INSTITUTE OF TECHNOLOGY

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2022 – 2023

Sir M VISVESVARAYA INSTITUTE OF TECHNOLOGY

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Off International Airport Road, Krishnadevaraya Nagar, Bengaluru – 562157

Department of Electrical & Electronics Engineering

CERTIFICATE

Certified that the Project Work Phase -II entitled *"Fault Detection and Correction in Dc Motors"* carried out by **Mr. ABHISHEK KUMAR (1MV19EE004), Mr. DEEPAK KUMAR (1MV19EE034), Mr. SOUMICK MAJUMDAR (1MV19EE092), Mr. SURAJ KUMAR (1MV19EE098)** a bonafide students of **Sir M VISVESVARAYA INSTITUTE OF TECHNOLOGY, Bengaluru** in partial fulfillment for the requirements for the award of the Degree of **Bachelor of Engineering** in **Electrical & Electronics Engineering** of the **Visvesvaraya Technological University,** Belagavi during the year **2022-2023.** It is certified that all corrections/suggestions indicated for Internal Assessment have been incorporated in the report deposited in the department library. The Project ork phase-II has been approvedas it satisfies the academic requirements in respect of Project Work Phase-II prescribed for the above-mentioned degree.

Signature of Guide	Signature of HoD	Signature of Principal
Mr. V. Rajesh Kumar	Dr. H L Suresh	Prof. Rakesh S G

PRINCIPAL
SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGY
Krishnadevarayanagar, Hunasamaranahalli
International Airport Road, Bangalore-562 157

EXTERNAL VIVA

Name of Examiners	Signature with Date
1. Dr M.S. Sheraghi	22/5/23
2. Manjula. B K	BKM 22/5/23

Sir M VISVESVARAYA INSTITUTE OF TECHNOLOGY
(Approved by AICTE New Delhi, Affiliated to VTU, Belagavi, ISO 9001:2008 Certified)
Off International Airport Road, Krishnadevaraya Nagar, Bengaluru – 562157

Department of Electrical & Electronics Engineering

DECLARATION

We are hereby declaring that the Project Work Phase-II entitled "**Fault Detection and Correction in DC Motors** "carried out by us and submitted in partial fulfilment for the award of **Bachelor of Engineering in Electrical & Electronics Engineering of the Visvesvaraya Technological University, Belagavi** during the year 2021-2022. The matter embodied in this Project Work Phase-II has not been submitted to any other university or institute for the award of any other Degree or Diploma.

Place: Bengaluru

Date: 22/05/2023

ABHISHEK KUMAR 1MV19EE004

DEEPAK KUMAR 1MV19EE034

SOUMICK MAJUMDAR 1MV19EE092

SURAJ KUMAR 1MV19EE098

VISVESVARAYA TECHNOLOGICAL UNIVERSITY

"Jnana Sangama", Belagavi-590 018

Project Report

on

"REAL TIME BUS TRACKING WITH IOT USING GPS"

submitted in partial fulfillment of the requirements for the award of the Degree of

BACHELOR OF ENGINEERING

IN

ELECTRICAL & ELECTRONICS ENGINEERING

Submitted by

Mr. MOHD JUNAID	**1MV19EE056**
Mr. PRASHANTH NOOLVI	**1MV19EE068**
Mr. RAHUL N M	**1MV19EE074**
Mr. SATHISH G K	**1MV19EE084**

Under the Guidance of

Dr. Mahesh K

Professor

Sir. MVIT, Bengaluru.

Department of Electrical & Electronics Engineering

SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGY

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2022 – 2023

SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGY

(Approved by AICTE New Delhi, Affiliated to VTU, Belagavi, ISO 9001:2008 Certified)

Off International Airport Road, Krishnadevaraya Nagar, Bengaluru – 562157

Department of Electrical & Electronics Engineering

CERTIFICATE

Certified that the project work entitled *"REAL TIME BUS TRACKING WITH IOT USING GPS"* carried out by **Mr. MOHD JUNAID (USN 1MV19EE056), Mr. PRASHANTH NOOLVI (1MV19EE068), Mr. RAHUL N M (1MV19EE074), Mr. SATHISH G K (1MV19EE084),** bonafide students of **SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGY, Bengaluru** in partial fulfillment for the requirements for the award of the degree of **Bachelor of Engineering** in **Electrical & Electronics Engineering** of the **Visvesvaraya Technological University,** Belagavi during the year **2022-2023.** It is certified that all corrections/suggestions indicated for Internal Assessment have been incorporated in the report deposited in the department library. The Project work report has been approved as it satisfies the academic requirements in respect of project work prescribed for the above-mentioned degree.

PRINCIPAL
SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGY
Krishnadevarayanagar, Hunasamaranahalli
Int... Airport Road, Bangalore-562 157

Signature Guide	Signature of HOD	Signature of Principal
Dr. Mahesh K	Dr. Suresh H L	Prof. Rakesh S G

EXTERNAL VIVA

Name of Examiners	Signature with Date
1. Dr. M. S. Suresh	23/05/2023
2. Manjula B.K	23/5/23

SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGY
(Approved by AICTE New Delhi, Affiliated to VTU, Belagavi, ISO 9001:2008 Certified)
Off International Airport Road, Krishnadevaraya Nagar, Bengaluru - 562157

Department of Electrical & Electronics Engineering

DECLARATION

We hereby declare that the project work entitled "**Real Time Bus Tracking With IOT Using GPS**" carried out by us and submitted in partial fulfilment for the award of **Bachelor of Engineering in Electrical & Electronics Engineering** of the Visvesvaraya Technological University, Belagavi during the year 2022-2023. The matter embodied in this project report has not been submitted to any other university or institute for the award of any other degree or diploma.

Place: Bengaluru
Date: 22/05/2023

MOHD JUNAID
1MV19EE056

PRASHANTH NOOLVI
1MV19EE068

RAHUL N M
1MV19EE074

SATHISH G K
1MV19EE084

VISVESVARAYA TECHNOLOGICAL UNIVERSITY

"Jnana Sangama", Belagavi-590018

Project Report

on

"DESIGN OF A MULTIPURPOSE SPRAYER FOR AGRICULTURAL AND INDUSTRIAL PURPOSE"

submitted in partial fulfillment of the requirements for the award of the Degree of

BACHELOR OF ENGINEERING

IN

ELECTRICAL & ELECTRONICS ENGINEERING

Submitted by

ISHA ASTHANA	1MV19EE041
KAUSHIKI	1MV19EE043
RIYANSHA DANGI	1MV19EE076
SUYESHA BHATTACHARJEE	1MV19EE099

Under the Guidance of

Dr. Parthasarathy V.

Associate Professor

Electrical & Electronics Eng. Dept.

Sir M. VIT, Bengaluru

Department of Electrical & Electronics Engineering

Sir M. VISVESVARAYA INSTITUTE OF TECHNOLOGY

(Approved by AICTE New Delhi, Affiliated to VTU, Belagavi, ISO 9001:2008 Certified)

Off International Airport Road, Krishnadevaraya Nagar, Bengaluru – 562157

2022 – 2023

Sir M. VISVESVARAYA INSTITUTE OF TECHNOLOGY
(Approved by AICTE New Delhi, Affiliated to VTU, Belagavi, ISO 9001:2008 Certified)
off International Airport Road, Krishnadevaraya Nagar, Bengaluru – 562157
Department of Electrical & Electronics Engineering

CERTIFICATE

Certified that the project work entitled "*Design of a Multipurpose Sprayer for Agriculture and Industrial Use*" carried out by **Ms. ISHA ASTHANA (1MV19EE041), Ms. KAUSHIKI (1MV19EE043), Ms. RIYANSHA DANGI (1MV19EE076), Ms. SUVESHA BHATTACHARJEE (1MV19EE099)**, the bonafide students of **Sir M. VISVESVARAYA INSTITUTE OF TECHNOLOGY**, Bengaluru in partial fulfillment for the requirements for the award of the degree of **Bachelor of Engineering in Electrical & Electronics** of the **Visvesvaraya Technological University**, Belagavi during the academic year **2022- 2023**. It is certified that all corrections/suggestions indicated for Internal Assessment have been incorporated in the report deposited in the department library. The Project work has been approved as it satisfies the academic requirements in respect of Project work prescribed for the above- mentioned degree.

Signature of Guide Dr. Parthasarathy.V 22/5/23	**Signature of HOD** Dr. Suresh H L 23/5/23	PRINCIPAL SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGY Krishnadevaraya Nagar International Airport Road, Bangalore-562 157 **Signature of Principal** Prof. Rakesh N

EXTERNAL VIVA VOCE

Name of Examiner	**Signature with Date**
1. Dr M. S. Suresh	23/5/23
2. Manjula. B. K	23/5/23

Sir M. VISVESVARAYA INSTITUTE OF TECHNOLOGY

(Approved by AICTE New Delhi, Affiliated to VTU, Belagavi, ISO 9001: 2008 Certified)

Off International Airport Road, Krishnadevaraya Nagar, Bengaluru – 562157

Department of Electrical & Electronics Engineering

DECLARATION

We are hereby declaring that the project work entitled **"Design of a Multipurpose Sprayer for Agriculture and Industrial Use"** carried out by me and submitted in partial fulfillment for the award of **Bachelor of Engineering** in **Electrical & Electronics Engineering**of the **Visvesvaraya Technological University, Belagavi** during the year **2022-2023**. The matter embodied in this project report has not been submitted to any other university or institute for the award of any other degree or diploma.

Place: Bengaluru

22/05/2023

ISHA ASTHANA (1MV19EE041)

KAUSHIKI (1MV19EE043)

RIYANASHA DANGI (1MV19EE076)

SUYESHA BHATTACHARJEE (1MV19EE099)

VISVESVARAYA TECHNOLOGICAL UNIVERSITY

"Jnana Sangama", Belagavi-590 018

Project Report

on

"A SMART HELMET BASED ON IOT FOR SAFETY AND ACCIDENT DETECTION"

submitted in partial fulfillment of the requirements for the award of the Degree of

BACHELOR OF ENGINEERING

IN

ELECTRICAL & ELECTRONICS ENGINEERING

Submitted by

HARSH PRAKASH	**1MV19EE038**
NILESH SAHAY	**1MV19EE062**
PRATYUSH RAJ PANDEY	**1MV19EE069**
YASHOVARDHAN SINHA	**1MV19EE107**

Under the Guidance of

Mrs. ANCHAL CHHABRA
Assistant Professor
Dept. of Electrical & Electronics Eng.
SIR MVIT, Bengaluru.

Department of Electrical & Electronics Engineering

Sir M VISVESVARAYA INSTITUTE OF TECHNOLOGY

(Approved by AICTE New Delhi. Affiliated to VTU, Belagavi, ISO 9001:2008 Certified)

Off International Airport Road, Krishnadevaraya Nagar, Bengaluru – 562157

2022 – 2023

Sir M VISVESVARAYA INSTITUTE OF TECHNOLOGY

(Approved by AICTE New Delhi, Affiliated to VTU, Belagavi, ISO 9001:2008 Certified)

Off International Airport Road, Krishnadevaraya Nagar, Bengaluru – 562157

Department of Electrical & Electronics Engineering

CERTIFICATE

Certified that the project work entitled *"A Smart Helmet Based on IOT For Safety And Accident Detection"* carried out by **Mr. HARSH PRAKASH (1MV19EE038), Mr. NILESH SAHAY (1MV19EE062), Mr. PRATYUSH RAJ PANDEY (1MV19EE069), Mr. YASHOVARDHAN SINHA (1MV19EE107)**, a bonafide students of **Sir M VISVESVARAYA INSTITUTE OF TECHNOLOGY, Bengaluru** in partial fulfillment for the requirements for the award of the degree of **Bachelor of Engineering** in **Electrical & Electronics Engineering** of the **Visvesvaraya Technological University,** Belagavi during the year **2022-2023.** It is certified that all corrections/suggestions indicated for Internal Assessment have been incorporated in the report deposited in the department library. The Project work phase-2 report has been approved as it satisfies the academic requirements in respect of project work phase-2 prescribed for the above-mentioned degree.

PRINCIPAL
SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGY
Krishnadevarayanagar, Hunasamaranahalli
International Airport Road, Bangalore-562 157

Signature of Guide	Signature of HOD	Signature of Principal
Mrs. Anchal Chhabra	Dr. Suresh H L	Prof. Rakesh S.G

BOE
Dr. R. Sivapriyan

EXTERNAL VIVA

Name of Examiners	Signature with Date
1. Dr M.S. Suresh	23/5/23
2. Manjula B.K	23/5/23

Sir M VISVESVARAYA INSTITUTE OF TECHNOLOGY

(Approved by AICTE: New Delhi, Affiliated to VTU, Belagavi, ISO 9001:2008 Certified)

Off International Airport Road, Krishnadevaraya Nagar, Bengaluru – 562157

Department of Electrical & Electronics Engineering

DECLARATION

We are hereby declare that the project work entitled **"A SMART HELMET BASED ON IOT FOR SAFETY AND ACCIDENT DETECTION"** carried out by me and submitted in partial fulfilment for the award of **Bachelor of Engineering in Electrical & Electronics Engineering of the Visvesvaraya Technological University, Belagavi** during the year 2022-2023. The matter embodied in this project work phase-2 has not been submitted to any other university or institute for the award of any other degree or diploma.

Place: Bengaluru

Date: 22 / 05 / 2023

HARSH PRAKASH

1MV19EE038

PRATYUSH RAJ PANDEY

1MV19EE069

NILESH SAHAY

1MV19EE062

YASHOVARDHAN SINHA

1MV19EE107

VISVESVARAYA TECHNOLOGICAL UNIVERSITY

"Jnana Sangama", Belagavi-590 018

Project Report

on

"DESIGN OF SMART WEARABLE MONITORING SYSTEM FOR PATIENTS WITH ALZHEIMER'S DISEASE"

submitted in partial fulfillment of the requirements for the award of the degree of

BACHELOR OF ENGINEERING

IN

ELECTRICAL & ELECTRONICS ENGINEERING

Submitted by

BINDUSHREE LM	1MV19EE030
HARSHITHA S REDDY	1MV19EE040
MAHALAKSHMI	1MV19EE050

Under the Guidance of

Mrs. Rekha Radhakrishnan
Assistant Professor,
Dept. of Electrical & Electronics Engg.,
Sir MVIT, Bengaluru.

Department of Electrical & Electronics Engineering

Sir M VISVESVARAYA INSTITUTE OF TECHNOLOGY

(Approved by AICTE New Delhi, Affiliated to VTU, Belagavi, ISO 9001:2008 Certified)

Off International Airport Road, Krishnadevaraya Nagar, Bengaluru – 562157

2022 – 2023

Sir M VISVESVARAYA INSTITUTE OF TECHNOLOGY

(Approved by AICTE New Delhi, Affiliated to VTU, Belagavi, ISO 9001:2015 Certified)

Off International Airport Road, Krishnadevaraya Nagar, Bengaluru – 562157

Department of Electrical & Electronics Engineering

CERTIFICATE

Certified that the project work entitled "*Design of smart wearable monitoring system for patients with Alzheimer's disease*" carried out by Ms. **BINDUSHREE. I.M, USN 1MV19EE030, Ms. HARSHITHA S REDDY, USN 1MV19EE040, Ms. MAHALAKSHMI, USN 1MV19EE050** a bonafide students of **Sir M VISVESVARAYA INSTITUTE OF TECHNOLOGY, Bengaluru** in partial fulfillment for the requirements for the award of the degree of **Bachelor of Engineering** in **Electrical & Electronics Engineering** of the **Visvesvaraya Technological University**, Belagavi during the year **2022-2023**. It is certified that all corrections/suggestions indicated for Internal Assessment have been incorporated in the report deposited in the department library. The Project work report has been approved as it satisfies the academic requirements in respect of project work prescribed for the above-mentioned degree.

PRINCIPAL
SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGY
Krishnadevarayanagar, International Airport Road, Bangalore-562 157

Signature of Guide	Signature of HOD	Signature of Principal
Mrs. Rekha Radhakrishnan	Dr. H L Suresh	Prof. Rakesh S G

EXTERNAL VIVA

Name of Examiners	Signature with Date
1. Dr Suresh. H.L	24/05/23
2.	24/05/23

Sir M VISVESVARAYA INSTITUTE OF TECHNOLOGY

(Approved by AICTE New Delhi, Affiliated to VTU, Belagavi, ISO 9001:2008 Certified)

Off International Airport Road, Krishnadevaraya Nagar, Bengaluru – 562157

Department of Electrical & Electronics Engineering

DECLARATION

We are hereby declaring that the project work phase II entitled **"Design Of Smart Wearable Monitoring System For Patients With Alzheimer's Disease"** carried out by me and submitted in partial fulfilment for the award of **Bachelor of Engineering in Electrical & Electronics Engineering of the Visvesvaraya Technological University, Belagavi** during the year 2022-2023.The matter embodied in this project report has not been submitted to any other university or institute for the award of any other degree or diploma.

Place: Bengaluru

Date:

Bindushree L.M

BINDUSHREE LM

1MV19EE030

Harshitha S Reddy

HARSHITHA S REDDY

1MV19EE040

Mahalakshmi

MAHALAKSHMI

1MV19EE050

VISVESVARAYA TECHNOLOGICAL UNIVERSITY

"Jnana Sangama", Belagavi-590 018

Project Report

on

" WIRELESS BLACK BOX FOR CARS USING SENSORS AND GPS MODULE "

submitted in partial fulfillment of the requirements for the award of the Degree of

BACHELOR OF ENGINEERING

IN

ELECTRICAL & ELECTRONICS ENGINEERING

Submitted by

BIBHUTI KUMAR	**1MV19EE029**
MRUGANK PANDYA	**1MV19EE058**
ROHAN KEDIA	**1MV19EE077**
SIDDHANT KUMAR	**1MV19EE088**

Under the Guidance of

Mrs. P. SUMALATHA

Assistant Professor

Dept of Electrical and Electronics Engineering

Sir MVIT, Bengaluru.

Department of Electrical & Electronics Engineering

Sir M VISVESVARAYA INSTITUTE OF TECHNOLOGY

(Approved by AICTE New Delhi, Affiliated to VTU, Belagavi, ISO 9001:2008 Certified)

Off International Airport Road, Krishnadevaraya Nagar, Bengaluru – 562157

2022 – 2023

Sir M VISVESVARAYA INSTITUTE OF TECHNOLOGY

(Approved by AICTE New Delhi, Affiliated to VTU, Belagavi, ISO 9001:2008 Certified)

Off International Airport Road, Krishnadevaraya Nagar, Bengaluru – 562157

Department of Electrical & Electronics Engineering

CERTIFICATE

Certified that the Project work entitled "*Wireless Black Box For Cars Using Sensors And GPS Module*" carried out by **Mr. BIBHUTI KUMAR (1MV19EE029), Mr. MRUGANK PANDYA (1MV19EE58), Mr. ROHAN KEDIA (1MV19EE077), Mr. SIDDHANT KUMAR (1MV19EE088),** bonafide students of **Sir M VISVESVARAYA INSTITUTE OF TECHNOLOGY, Bengaluru** in partial fulfillment for the requirements for the award of the degree of **Bachelor of Engineering** in **Electrical & Electronics Engineering** of the **Visvesvaraya Technological University,** Belagavi during the year **2022-2023.** It is certified that all corrections/suggestions indicated for Internal Assessment have been incorporated in the report deposited in the department library. The Project work report has been approved as it satisfies the academic requirements in respect of project work prescribed for the above-mentioned degree.

PRINCIPAL
SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGY
Krishnadevarayanagar, Hunasamaranahalli
International Airport Road, Bangalore-562 157

Signature Guide	Signature of HOD	Signature of Principal
Mrs. P. Sumalatha	Dr. Suresh H L	Prof. Rakesh S G

EXTERNAL VIVA

	Name of Examiners	Signature with Date
1.	Dr SURESH. H.L	24/10/23
2.	Dr N Ramarao	24/10/23

Sir M VISVESVARAYA INSTITUTE OF TECHNOLOGY

(Approved by AICTE New Delhi, Affiliated to VTU, Belagavi, ISO 9001:2008 Certified)

Off International Airport Road, Krishnadevaraya Nagar, Bengaluru – 562157

Department of Electrical & Electronics Engineering

DECLARATION

We hereby declare that the Project work entitled **"Wireless Black Box for Cars using Sensors and GPS module"** carried out by us and submitted in partial fulfilment for the award of **Bachelor of Engineering in Electrical & Electronics Engineering of the Visvesvaraya Technological University, Belagavi** during the year 2022-2023.The matter embodied in this project report has not been submitted to any other university or institute for the award of any other degree or diploma.

Place: Bengaluru
Date : 24-05-23

BIBHUTI KUMAR
1MV19EE029

MRUGANK PANDYA
1MV19EE058

ROHAN KEDIA
1MV19EE077

SIDDHANT KUMAR
1MV19EE088

VISVESVARAYA TECHNOLOGICAL UNIVERSITY

"Jnana Sangama", Belagavi-590 018

Project Report

on

"ARDUINO BASED MULTIMODE FLOOR CLEANING ROBOT"

submitted in partial fulfillment of the requirements for the award of the Degree of

BACHELOR OF ENGINEERING

IN

ELECTRICAL & ELECTRONICS ENGINEERING

Submitted by

ADARSH TIWARI	1MV19EE007
ANMOL ANAND	1MV19EE019
ASUTOSH NAYAK	1MV19EE024
REET GUPTA	1MV19EE075

Under the Guidance of

Dr. SURESH H L

Professor and Head

Department of Electrical & Electronics Eng.

Sir MVIT, Bengaluru.

Department of Electrical & Electronics Engineering

Sir M VISVESVARAYA INSTITUTE OF TECHNOLOGY

(Approved by AICTE New Delhi, Affiliated to VTU, Belagavi, ISO 9001:2008 Certified)

Off International Airport Road, Krishnadevaraya Nagar, Bengaluru – 562157

2022 – 2023

Sir M VISVESVARAYA INSTITUTE OF TECHNOLOGY

(Approved by AICTE New Delhi, Affiliated to VTU, Belagavi, ISO 9001:2008 Certified)

Off International Airport Road, Krishnadevaraya Nagar, Bengaluru – 562157

Department of Electrical & Electronics Engineering

CERTIFICATE

Certified that the project work entitled "*Arduino Based Multimode Floor Cleaning Robot*" carried out by **Mr. ADARSH TIWARI, USN 1MV19EE007, Mr. ANMOL ANAND, USN 1MV19EE019, Mr. ASUTOSH NAYAK, USN 1MV19EE024, Ms. REET GUPTA, USN 1MV19EE075** a bonafide students of **Sir M VISVESVARAYA INSTITUTE OF TECHNOLOGY, Bengaluru** in partial fulfillment for the requirements for the award of the degree of **Bachelor of Engineering** in **Electrical & Electronics Engineering** of the **Visvesvaraya Technological University,** Belagavi during the year **2022-2023.** It is certified that all corrections/suggestions indicated for Internal Assessment have been incorporated in the report deposited in the department library. The Project work report has been approved as it satisfies the academic requirements in respect of project work prescribed for the above-mentioned degree.

PRINCIPAL
SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGY
Krishnadevarayanagar, Hunasamaranahalli
International Airport Road, Bangalore-562 157

Signature Guide	**Signature of HOD**	**Signature of Principal**
Dr. Suresh H L	Dr. Suresh H L	Prof. Rakesh S.G.

EXTERNAL VIVA

Name of Examiners	Signature with Date
1. Dr SURESH H L	24/5/23
2. Dr. N. Ramarao	24/05/23

Sir M VISVESVARAYA INSTITUTE OF TECHNOLOGY

(Approved by AICTE New Delhi, Affiliated to VTU, Belagavi, ISO 9001:2008 Certified)

Off International Airport Road, Krishnadevaraya Nagar, Bengaluru – 562157

Department of Electrical & Electronics Engineering

DECLARATION

We are hereby declare that the project work entitled **"Arduino Based Multimode floor cleaning robot"** carried out by me and submitted in partial fulfilment for the award of **Bachelor of Engineering in Electrical & Electronics Engineering of the Visvesvaraya Technological University, Belagavi** during the year 2022-2023.The matter embodied in this project report has not been submitted to any other university or institute for the award of any other degree or diploma.

Place: Bengaluru

Date: 23/05/2023

Adarsh Tiwari

ADARSH TIWARI

USN: 1MV19EE007

Anmol Anand

ANMOL ANAND

1MV19EE019

ASUTOSH NAYAK

1MV19EE024

Reet Gupta

REET GUPTA

1MV19EE075

VISVESVARAYA TECHNOLOGICAL UNIVERSITY

"Jnana Sangama", Belagavi-590 018

Project Report

On

"EFFICIENT WIRELESS ELECTRIC VEHICLE CHARGING SYSTEM WITH RFID PROTECTION"

submitted in partial fulfillment of the requirements for the award of the degree of

BACHELOR OF ENGINEERING

IN

ELECTRICAL & ELECTRONICS ENGINEERING

Submitted by

BANU PRASAD K Y	**1MV19EE028**
RAHMATH ALI B	**1MV19EE072**
CHARAN PB	**1MV20EE404**
DHARNEESH R	**1MV20EE405**

Under the Guidance of

Mr. PRADEEP KUMAR

Assistant Professor

Dept of Electrical & Electronics Engg.

Sir MVIT, Bengaluru.

Department of Electrical & Electronics Engineering

Sir M VISVESVARAYA INSTITUTE OF TECHNOLOGY

(Approved by AICTE New Delhi, Affiliated to VTU, Belagavi, ISO 9001:2008 Certified)

Off International Airport Road, Krishnadevaraya Nagar, Bengaluru – 562157

2022 – 2023

Sir M VISVESVARAYA INSTITUTE OF TECHNOLOGY

(Approved by AICTE New Delhi, Affiliated to VTU, Belagavi, ISO 9001:2008 Certified)

Off International Airport Road, Krishnadevaraya Nagar, Bengaluru – 562157

Department of Electrical & Electronics Engineering

CERTIFICATE

Certified that the project work entitled **"EFFICIENT WIRELESS ELECTRIC VEHICLE CHARGING SYSTEM WITH RFID PROTECTION"** carried out by **Mr. BANU PRASAD K Y [1MV19EE028], Mr. RAHMATH ALI B [1MV19EE072], Mr. CHARAN PB [1MV20EE404], Mr. DHARNEESH R [1MV20EE405]**, a bonafide students of **Sir M VISVESVARAYA INSTITUTE OF TECHNOLOGY, Bengaluru** in partial fulfillment for the requirements for the award of the degree of **Bachelor of Engineering** in **Electrical & Electronics Engineering** of the **Visvesvaraya Technological University,** Belagavi during the year **2022-2023.** It is certified that all corrections/suggestions indicated for Internal Assessment have been incorporated in the report deposited in the department library. The Project work report has been approved as it satisfies the academic requirements in respect of project work prescribed for the above mentioned degree.

Signature of Guide Mr. Pradeep Kumar	**Signature of HOD** Dr. Suresh H L	**Signature of Principle** Prof. Rakesh S G

SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGY
Krishnadevaraya Nagar, International Airport Road, Bengaluru-562 157

EXTERNAL VIVA

Name of Examiners	**Signature with Date**
1. DR SURESH H.L	24/05/2023
2. Dr N Ramarao	24/05/23

Sir M VISVESVARAYA INSTITUTE OF TECHNOLOGY

(Approved by AICTE New Delhi, Affiliated to VTU, Belagavi, ISO 9001:2008 Certified)

Off International Airport Road, Krishnadevaraya Nagar, Bengaluru – 562157

2022-2023

Department of Electrical & Electronics Engineering

DECLARATION

We are hereby declare that the project work entitled **"EFFICIENT WIRELESS ELECTRIC VEHICLE CHARGING SYSTEM WITH RFID PROTECTION"** carried out by us and submitted in partial fulfilment for the award of **Bachelor of Engineering in Electrical & Electronics Engineering of the Visvesvaraya Technological University, Belagavi** during the year 2022- 2023.The matter embodied in this project report has not been submitted to any other university or institute for the award of any other degree or diploma.

Place: Bengaluru
Date:

BANU PRASAD K Y
1MV19EE020

RAHMATH ALI B
1MV19EE072

CHARAN PB
1MV20EE404

DHARNEESH R
1MV20EE405

VISVESVARAYA TECHNOLOGICAL UNIVERSITY

"Jnana Sangama", Belagavi-590 018

Project Report

on

"IOT BASED REMOTE CONTROLLED ROBOT WITH INTEGRATED CAMERA FOR ENVIRONMENTAL MONITORING AND REAL TIME SURVEILLANCE"

submitted in partial fulfillment of the requirements for the award of the Degree of

BACHELOR OF ENGINEERING

IN

ELECTRICAL & ELECTRONICS ENGINEERING

Submitted by

MANYA JHA	1MV19EE053
MEGHANA V	1MV19EE054
TANYA SINGH	1MV19EE102
ZIKRA RAHMAN	1MV19EE109

Under the Guidance of

Dr. Mahesh K

Professor

Dept of Electrical and Electronics Engg.,

Sir. MVIT, Bengaluru.

Department of Electrical & Electronics Engineering

SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGY

(Approved by AICTE New Delhi, Affiliated to VTU, Belagavi, ISO 9001:2008 Certified)

Off International Airport Road, Krishnadevaraya Nagar, Bengaluru – 562157

2022 – 2023

SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGY

(Approved by AICTE New Delhi, Affiliated to VTU, Belagavi, ISO 9001:2008 Certified)

Off International Airport Road, Krishnadevaraya Nagar, Bengaluru – 562157

Department of Electrical & Electronics Engineering

CERTIFICATE

Certified that the project work entitled *"IOT BASED REMOTE CONTROLLED ROBOT WITH INTEGRATED CAMERA FOR ENVIRONMENTAL MONITORING AND REAL TIME SURVEILLANCE"* carried out by **Ms. MANYA JHA, USN 1MV19EE053, Ms. MEGHANA V, USN 1MV19EE054, Ms. TANYA SINGH, USN 1MV19EE102, Ms. ZIKRA RAHMAN, USN 1MV19EE109,** bonafide students of **SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGY, Bengaluru** in partial fulfillment for the requirements for the award of the degree of **Bachelor of Engineering** in **Electrical & Electronics Engineering** of the **Visvesvaraya Technological University,** Belagavi during the year **2022-2023.** It is certified that all corrections/suggestions indicated for Internal Assessment have been incorporated in the report deposited in the department library. The Project work report has been approved as it satisfies the academic requirements in respect of project work prescribed for the above-mentioned degree.

PRINCIPAL
SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGY
Krishnadevarayanagar, Hunasamaranahalli
International Airport Road, Bangalore-562 157

Signature Guide Dr. Mahesh K	**Signature of HOD** Dr. Suresh H L	**Signature of Principal** Prof. Rakesh

EXTERNAL VIVA

Name of Examiners	**Signature with Date**
1. Dr SURESH H L	24/5/2023
2. Dr N Ramarao	24/05/23

SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGY
(Approved by AICTE New Delhi, Affiliated to VTU, Belagavi, ISO 9001:2008 Certified)
Off International Airport Road, Krishnadevaraya Nagar, Bengaluru – 562157
Department of Electrical & Electronics Engineering

DECLARATION

We hereby declare that the project work entitled **"IoT Based Remote Controlled Robot with Integrated Camera for Environmental Monitoring and Real Time Surveillance"** carried out by us and submitted in partial fulfilment for the award of **Bachelor of Engineering in Electrical & Electronics Engineering of the Visvesvaraya Technological University, Belagavi** during the year 2022-2023. The matter embodied in this project report has not been submitted to any other university or institute for the award of any other degree or diploma.

Place: Bengaluru
Date:23/05/2023

MANYA JHA
1MV19EE053

MEGHANA V
1MV19EE054

TANYA SINGH
1MV19EE102

ZIKRA RAHMAN
1MV19EE109

VISVESVARAYA TECHNOLOGICAL UNIVERSITY

"Jnana Sangama", Belagavi-590 018

Project Report

on

"ESTIMATION OF BATTERY CONDITION FOR ELECTRIC VEHICLE APPLICATIONS"

submitted in partial fulfillment of the requirements for the award of the Degree of

BACHELOR OF ENGINEERING

IN

ELECTRICAL & ELECTRONICS ENGINEERING

Submitted by

ABHISHEK RAJ	1MV19EE005
MOHHAMAD AFSER	1MV19EE057
NISHANT SOURAV	1MV19EE063
UJJWAL KR. PANDEY	1MV19EE104

Under the Guidance of

Mrs. D BEULA

Associate Professor,

Dept of Electrical and Electronics Engg.,

Sir MVIT, Bengaluru

Department of Electrical & Electronics Engineering

SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGY

(Approved by AICTE New Delhi, Affiliated to VTU, Belagavi, ISO 9001:2008 Certified)

Off International Airport Road, Krishnadevaraya Nagar, Bengaluru – 562157

2022 – 2023

SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGY

(Approved by AICTE New Delhi, Affiliated to VTU, Belagavi, ISO 9001:2008 Certified)

Off International Airport Road, Krishnadevaraya Nagar, Bengaluru – 562157

Department of Electrical & Electronics Engineering

CERTIFICATE

Certified that the project work entitled **"Estimation of Battery Condition for Eelectric Vehicle Applications"** carried out by **Mr. ABHISHEK RAJ (USN 1MV19EE005), Mr. MOHHAMAD AFSER (1MV19EE057), Mr. NISHANT SOURAV (1MV19EE063), Mr. UJJWAL KR. PANDEY (1MV19EE104)**, bonafide students of **SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGY, Bengaluru** in partial fulfillment for the requirements for the award of the degree of **Bachelor of Engineering** in **Electrical & Electronics Engineering** of the **Visvesvaraya Technological University,** Belagavi during the year **2022-2023.** It is certified that all corrections/suggestions indicated for Internal Assessment have been incorporated in the report deposited in the department library. The Project work report has been approved as it satisfies the academic requirements in respect of project work prescribed for the above-mentioned degree.

Signature Guide
for Mrs. D Beula
Dr. R. Sivapriyan

Signature of HOD
Dr. Suresh H L

Signature of Principal
Prof. Vakesh G
PRINCIPAL
SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGY
Krishnadevarayanagar, Hunasamaranahalli
International Airport Road, Bangalore-562 157

EXTERNAL VIVA

Name of Examiners	Signature with Date
1. Dr. SURESH. H.L	25/5/23
2. Dr. N. Ramaraj	25/05/23

VISVESVARAYA TECHNOLOGICAL UNIVERSITY

"Jnana Sangama", Belagavi - 590 018

Project Report

on

"SMART ENERGY ANALYZING DEVICE WITH THEFT DETECTION"

submitted in partial fulfillment of the requirements for the award of the Degree of

BACHELOR OF ENGINEERING

IN

ELECTRICAL & ELECTRONICS ENGINEERING

Submitted by

Mr. ROHITH C H	**1MV19EE079**
Mr. SREEJITH C S	**1MV19EE095**
Mr. SYED IRFAN	**1MV19EE100**
Mr. YESHWANTH RAJ	**1MV19EE108**

Under the Guidance of

Dr. MAHESH K

Professor

Dept of Electrical and Electronics Engg,

Sir. MVIT,Bengaluru

Department of Electrical & Electronics Engineering

Sir M VISVESVARAYA INSTITUTE OF TECHNOLOGY

(Approved by AICTE New Delhi, Affiliated to VTU, Belagavi, ISO 9001:2008 Certified)

Off International Airport Road, Krishnadevaraya Nagar, Bengaluru – 562157

2022 – 2023

Sir M VISVESVARAYA INSTITUTE OF TECHNOLOGY

(Approved by AICTE New Delhi, Affiliated to VTU, Belagavi, ISO 9001:2008 Certified)

Off International Airport Road, Krishnadevaraya Nagar, Bengaluru – 562157

Department of Electrical & Electronics Engineering

CERTIFICATE

Certified that the Project Work entitled "SMART ENERGY ANALYZING DEVICE WITH THEFT DETECTION" carried out by **Mr. ROHITH C H, USN 1MV19EE079, Mr. SREEJITH CS, USN 1MV19EE095, Mr. SYED IRFAN, USN 1MV19EE100, Mr YESHWANTH RAJ, USN 1MV19EE108** a bonafide students of **Sir M VISVESVARAYA INSTITUTE OFTECHNOLOGY, Bengaluru** in partial fulfillment for the requirements for the award of the degreeof **Bachelor of Engineering** in **Electrical & Electronics Engineering** of the **Visvesvaraya Technological University,** Belagavi during the year **2022-2023.** It is certified that all corrections/suggestions indicated for Internal Assessment have been incorporated in the report deposited in the department library. The Project work report has been approved as it satisfiesthe academic requirements in respect of project work prescribed for the above-mentioned degree.

PRINCIPAL
SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGY
Krishnadevarayanagar, Hunasamaranahalli
International Airport Road, Bangalore-562 157

Signature of Guide	Signature of HOD	Signature of Principle
Dr. Mahesh K	Dr. Suresh H L	Prof. Rakesh S G

EXTERNAL VIVA

Name of examiner	Signature with date
1. Dr SURESH - H L	23/5/23
2. Dr N Ramaraj - Ramaraj	23/5/23

VISVESVARAYA TECHNOLOGICAL UNIVERSITY

"Jnana Sangama", Belagavi-590018

Project Report

on

"SOLAR WIRELESS ELECTRIC VEHICLE CHARGING SYSTEM"

submitted in partial fulfillment of the requirements for the award of the Degree of

BACHELOR OF ENGINEERING

IN

ELECTRICAL & ELECTRONICS ENGINEERING

Submitted by

ABHISHEK KUMAR	1MV19EE003
ADITYA KUMAR	1MV19EE010
ALI AHMED	1MV19EE012
AMAN KUMAR	1MV19EE013

Under the Guidance of

Mrs. Bindiya Tyagi

Assistant Professor

Dept. of Electrical & Electronics Engineering,

SIR MVIT, Bengaluru.

Department of Electrical & Electronics Engineering

Sir M VISVESVARAYA INSTITUTE OF TECHNOLOGY

(Approved by AICTE New Delhi, Affiliated to VTU, Belagavi, ISO 9001:2008 Certified)

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2022– 2023

Sir M VISVESVARAYA INSTITUTE OF TECHNOLOGY

(Approved by AICTE New Delhi, Affiliated to VTU, Belagavi, ISO 9001:2008 Certified)

Off International Airport Road, Krishnadevaraya Nagar, Bengaluru – 562157

Department of Electrical & Electronics Engineering

CERTIFICATE

Certified that the project work entitled *"Solar wireless electric vehicle charging system"* carried out by **ABHISHEK KUMAR, USN: 1MV19EE003, ADITYA KUMAR, USN: 1MV19EE010, ALI AHMED, USN: 1MV19EE012, AMAN KUMAR, USN: 1MV19EE013** a bonafide students of **Sir M. VISVESVARAYA INSTITUTE OF TECHNOLOGY, Bengaluru** in partial fulfillment for the requirements for the award of the degree of ***Bachelor of Engineering in Electrical & Electronics Engineering*** of the **Visvesvaraya Technological University,** Belagavi during the year **2022-2023.** It is certified that all corrections/suggestions indicated for Internal Assessment have been incorporated in the report deposited in the department library. The project work report has been approved as it satisfies the academic requirements in respect of project work prescribed for the above-mentioned degree.

PRINCIPAL
SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGY
Krishnadevarayanagar, Hunasamaranahalli
International Airport Road, Bengaluru-562 157

Signature of Guide	Signature of HOD	Signature of Principal
Mrs. Bindiya Tyagi	Dr. Suresh H L	Prof. Rakesh S.G.

EXTERNAL VIVA

Name of Examiners	Signature with Date
1. Dr M. S. Sravesh	23/5/23
2. Manjula. B.K	BKM 23.05.23

Sir M VISVESVARAYA INSTITUTE OF TECHNOLOGY

(Approved by AICTE, New Delhi, Affiliated to VTU, Belagavi, ISO 9001:2008 Certified)

Off International Airport Road, Krishnadevaraya Nagar, Bengaluru – 562157

Department of Electrical & Electronics Engineering

DECLARATION

We are hereby declaring that the project work entitled "**Solar Wireless Electric Vehicle Charging System**" carried out by us and submitted in partial fulfillment for the award of **Bachelor of Engineering in Electrical & Electronics Engineering** of the Visvesvaraya Technological University, Belagavi during the year 2022-2023 The matter embodied in this project report has not been submitted to any other university or institute for the award of any other degree or diploma

Place: Bengaluru
Date: 19/05/2023

ABHISHEK KUMAR(1MV19EE003)

ADITYA KUMAR(1MV19EE005)

ALI AHMED(1MV19EE012)

AMAN KUMAR(1MV19EE015)

VISVESVARAYA TECHNOLOGICAL UNIVERSITY

"Jnana Sangama", Belagavi-590018

Project Report

on

"PIEZOELECTRIC ENERGY PROCREATION AND IT'S UTILIZATION FOR STREET LIGHT AUTOMATION"

submitted in partial fulfillment of the requirements for the award of the Degree of

BACHELOR OF ENGINEERING

IN

ELECTRICAL & ELECTRONICS ENGINEERING

Submitted by

AAYUSH	1MV19EE005
PRANAV KUMAR	1MV19EE067
SAIYMEEN FATIMA	1MV19EE081
SOURA UPADHYAY	1MV19EE095

Under the Guidance of

Mr. SIDDAPPAJI M R

Assistant Professor

Dept. of Electrical and Electronics Engineering

SIR MVIT, Bengaluru

Department of Electrical & Electronics Engineering

Sir M VISVESVARAYA INSTITUTE OF TECHNOLOGY

(Approved by AICTE, New Delhi, Affiliated to VTU, Belagavi, ISO 9001:2008 Certified)

Off International Airport Road, Krishnadevaraya Nagar, Bengaluru – 562157

2022– 2023

SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGY

(Approved by AICTE New Delhi, Affiliated to VTU, Belagavi, ISO 9001:2008 Certified)

Off International Airport Road, Krishnadevaraya Nagar, Bengaluru – 562157

Department of Electrical & Electronics Engineering

CERTIFICATE

Certified that the project work entitled "PIEZOELECTRIC ENERGY PROCREATION AND IT'S UTILIZATION FOR STREET LIGHT AUTOMATION" carried out by **AAYUSH, USN: 1MV19EE001, PRANAV KUMAR, USN: 1MV19EE067, SAIYMEEN FATIMA, USN: 1MV18EE081, SOURA UPADHYAY, USN: 1MV19EE093** a bonafide students of **Sir M. VISVESVARAYA INSTITUTE OF TECHNOLOGY, Bengaluru** in partial fulfillment for the requirements for the award of the degree of **Bachelor of Engineering** in **Electrical & Electronics Engineering** of the **Visvesvaraya Technological University,** Belagavi during the year **2022-2023.** It is certified that all corrections/suggestions indicated for Internal Assessment have been incorporated in the report deposited in the department library. The project work report has been approved as it satisfies the academic requirements in respect of project work prescribed for the above- mentioned degree.

PRINCIPAL
SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGY
Krishnadevaraya Nagar, Thimmasandra, Jarakabandekaval Post
International Airport Road, Bangalore-562 157

Signature of Guide	Signature of HOD	Signature of Principal
22/5/23	23/5/23	
Mr. Siddappaji M R	Dr. Suresh H L	Prof. Rakesh S. G.

EXTERNAL VIVA

Name of Examiners	Signature with Date
1. Dr M. S. Suresh	28/5/23
2. Manjula. B. K	23/5/23

SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGY

(Approved by AICTE New Delhi, Affiliated to VTU, Belagavi, ISO 9001:2008 Certified)

Off International Airport Road, Krishnadevaraya Nagar, Bengaluru – 562157

Department of Electrical & Electronics Engineering

DECLARATION

We are hereby declaring that the project work entitled **"PIEZOELECTRIC ENERGY PROCREATION AND IT'S UTILIZATION FOR STREET LIGHT AUTOMATION"** carried out by us and submitted in partial fulfilment for the award of **Bachelor of Engineering in Electrical & Electronics Engineering of the Visvesvaraya Technological University, Belagavi** during the year 2022-2023. The matter embodied in this project work report has not been submitted to any other university orinstitute for the award of any other degree or diploma.

Place: Bengaluru
Date: 19/05/2023

Aayush
AAYUSH
1MV19EE001

Pranav
PRANAV KUMAR
1MV19EE067

Saiy
SAIYMEEN FATIMA
1MV19EE081

Soura
SOURA UPADHYAY
1MV19EE093

VISVESVARAYA TECHNOLOGICAL UNIVERSITY

"Jnana Sangama", Belagavi-590 018

Project Report

on

"AUTOMATIC RAILWAY GATE CONTROLLING"

submitted in partial fulfillment of the requirements for the award of the Degree of

BACHELOR OF ENGINEERING

IN

ELECTRICAL & ELECTRONICS ENGINEERING

Submitted by

AGRANI DEEPAK	1MV19EE011
KUNAL KUMAR	1MV19EE045
KUSHAGRA DEEPAK	1MV19EE046
SATYAM	1MV19EE085

Under the Guidance of

Mrs. PRIYANKA NAYAK

Assistant Professor

Dept of Electrical & Electronics Engineering,

SIR MVIT, Bengaluru.

Department of Electrical & Electronics Engineering

Sir M VISVESVARAYA INSTITUTE OF TECHNOLOGY

(Approved by AICTE New Delhi, Affiliated to VTU, Belagavi, ISO 9001:2008 Certified)

Off International Airport Road, Krishnadevaraya Nagar, Bengaluru – 562157

2022-2023

Sir M VISVESVARAYA INSTITUTE OF TECHNOLOGY

(Approved by AICTE New Delhi, Affiliated to VTU, Belagavi, ISO 9001:2008 Certified)

Off International Airport Road, Krishnadevaraya Nagar, Bengaluru - 562157

Department of Electrical & Electronics Engineering

CERTIFICATE

Certified that the Project work entitled "*Automatic Railway Gate Controlling*" carried out by **Mr. AGRANI DEEPAK (USN 1MV19EE011), Mr. KUNAL KUMAR (USN 1MV19EE045), Mr. KUSHAGRA DEEPAK (USN 1MV19EE046), Mr. SATYAM (USN 1MV19EE085),** bonafide students of **Sir M. VISVESVARAYA INSTITUTE OF TECHNOLOGY, Bengaluru** in partial fulfillment for the requirements for the award of the degree of **Bachelor of Engineering** in **Electrical & Electronics Engineering** of the **Visvesvaraya Technological University,** Belagavi during the year **2022-2023.** It is certified that all corrections/suggestions indicated for Internal Assessment have been incorporated in the report deposited in the department library. The Project work report has been approved as it satisfies the academic requirements in respect of project work prescribed for the above- mentioned degree.

Signature of Guide Mrs. Priyanka Nayak	**Signature of HOD** Dr. Suresh H L	PRINCIPAL SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGY Krishnadevaraya Nagar, Yelahanka, Bangalore Off International Airport Road, Bangalore-562 157

EXTERNAL VIVA

Name of Examiners	**Signature with Date**
1. Dr M. L. Suresh	23/5/23
2. Manjula B.K	23/5/23

Sir M VISVESVARAYA INSTITUTE OF TECHNOLOGY

Approved by AICTE, New Delhi, Affiliated to VTU, Belagavi, Recognized by Govt. of Karnataka

Off International Airport Road, Krishnadevaraya Nagar, Bengaluru - 562157

Department of Electrical & Electronics Engineering

DECLARATION

We are hereby declare that the Project work entitled "Automatic Railway Gate Controlling" carried out by us and submitted in partial fulfillment for the award of Bachelor of Engineering in Electrical & Electronics Engineering of the Visvesvaraya Technological University, Belagavi during the year 2022-2023 The matter embodied in this project report has not been submitted to any other university or institute for the award of any other degree or diploma.

Place: Bengaluru

Date: 22/05/2023

AGRANI DEEPAK

1MV19EE011

KUSHAGRA DEEPAK

1MV19EE048

VISVESVARAYA TECHNOLOGICAL UNIVERSITY

"Jnana Sangama", Belagavi-590 018

Project Report

on

"MACHINE LEARNING FOR PCB DEFECT IDENTIFICATION"

submitted in partial fulfillment of the requirements for the award of the Degree of

BACHELOR OF ENGINEERING

IN

ELECTRICAL & ELECTRONICS ENGINEERING

Submitted by

ARUN M	1MV19EE021
ASHIV C SANJEEV	1MV19EE023
BALAJI S	1MV19EE026
JAYANTH S	1MV19EE042

Under the Guidance of

Mrs. D BEULA
Associate Professor,
Dept of Electrical and Electronics Engg.,
Sir. MVIT, Bengaluru

Department of Electrical & Electronics Engineering

SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGY

(Approved by AICTE, New Delhi. Affiliated to VTU, Belagavi. ISO 9001:2008 Certified)

Off International Airport Road, Krishnadevaraya Nagar, Bengaluru – 562157

2022 – 2023

SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGY

(Approved by AICTE New Delhi. Affiliated to VTU, Belagavi. ISO 9001:2008 Certified)

Off International Airport Road, Krishnadevaraya Nagar, Bengaluru– 562157

Department of Electrical & Electronics Engineering

CERTIFICATE

Certified that the project work entitled "*Machine learning for PCB defect identification*" carried out by **Mr. ARUN M (USN 1MV19EE021) Mr. ASHIV C SANJEEV (1MV19EE023), Mr. BALAJI S (1MV19EE026), Mr. JAYANTH S (1MV19EE042)** a bonafide students of **Sir M. VISVESVARAYA INSTITUTE OF TECHNOLOGY, Bengaluru** in partial fulfillment for the requirements for the award of the degree of **Bachelor of Engineering** in **Electrical & Electronics Engineering** of the **Visvesvaraya Technological University**, Belagavi during the year **2022-2023**. It is certified that all corrections/suggestions indicated for Internal Assessment have been incorporated in the report deposited in the department library. The project report has been approved as it satisfies the academic requirements in respect of project work prescribed for the above-mentioned degree.

PRINCIPAL
SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGY
Krishnadeva Nagar, Hunasamaranahalli
International Airport Road, Bengaluru-562 157

Signature of Guide
For Mrs. D Beula
Dr. R. Sivapriyan

Signature of HOD
Dr. Suresh H.L.

Signature of Principal
Prof. Rakesh S. G

EXTERNAL VIVA

Name of Examiners	Signature with Date
1.	
2. Dr. N Ramarao	15/05/23

SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGY

(Approved by AICTE, New Delhi, Affiliated to VTU, Belagavi, ISO 9001:2008 Certified)

Off International Airport Road, Krishnadevaraya Nagar, Bengaluru – 562157

Department of Electrical & Electronics Engineering

DECLARATION

We are hereby declare that the project work entitled **"Machine Learning For PCB Defect Identification"** carried out by us and submitted in partial fulfilment for the award of **Bachelor of Engineering in Electrical & Electronics Engineering of the Visvesvaraya Technological University, Belagavi** during the year 2022-2023.The matter embodied in this project report has not been submitted to any other university or institute for the award of any other degree or diploma.

Place: Bengaluru

Date:

ARUN M

USN:1MV19EE021

ASHIV C SANJEEV

USN:1MV19EE023

BALAJI S

USN:1MV19EE026

JAYANTH S

USN:1MV19EE042

VISVESVARAYA TECHNOLOGICAL UNIVERSITY

"Jnana Sangama", Belagavi-590 018

Project Work Report

on

"IOT BASED CIRCUIT BREAKER"

submitted in partial fulfillment of the requirements for the award of the Degree of

BACHELOR OF ENGINEERING

IN

ELECTRICAL & ELECTRONICS ENGINEERING

Submitted by

BALBHIM	1MV19EE027
CHETHANKUMAR SM	1MV19EE031
DILEEP BN	1MV19EE038
SHIVKUMAR	1MV19EE087

Under the Guidance of

Mr. Bhaskar C

Assistant Professor

Sir MVIT, Bengaluru

Department of Electrical & Electronics Engineering

Sir M VISVESVARAYA INSTITUTE OF TECHNOLOGY

(Approved by AICTE New Delhi, Affiliated to VTU, Belagavi, ISO 9001:2008 Certified)

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2022 – 2023

Sir M VISVESVARAYA INSTITUTE OF TECHNOLOGY
(Approved by AICTE New Delhi, Affiliated to VTU, Belagavi, ISO 9001:2008 Certified)
Off International Airport Road, Krishnadevaraya Nagar, Bengaluru – 562157

Department of Electrical & Electronics Engineering

CERTIFICATE

Certified that the project work entitled "*IOT BASED CIRCUIT BREAKER*" carried out by **Mr. BALBHIM (USN 1MV19EE027), Mr. CHETHANKUMAR SM (USN 1MV19EE031), Mr. DILEEP BN (USN 1MV19EE035), Mr. SHIVKUMAR (USN 1MV19EE087),** a bonafide students of **Sir M VISVESVARAYA INSTITUTE OF TECHNOLOGY, Bengaluru** in partial fulfillment for the requirements for the award of the degree of **Bachelor of Engineering** in **Electrical & Electronics Engineering** of the **Visvesvaraya Technological University,** Belagavi during the year **2022-2023.** It is certified that all corrections/suggestions indicated for Internal Assessment have been incorporated in the report deposited in the department library. The Project work report has been approved as it satisfies the academic requirements in respect of project work prescribed for the above-mentioned degree.

PRINCIPAL
SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGY
Krishnadevaravanagar, Hunasamaranahalli
International Airport Road, Bangalore-562 157

Signature of Guide	**Signature of HOD**	**Signature of Principal**
Mr. Bhaskar C	Dr. Suresh H.L	Prof. Rakesh S G

EXTERNAL VIVA

Name of Examiner	**Signature with Date**
1. Dr SUKESH H L	25/5/23
2. Dr. N Ramarao	25/05/23

Sir M VISVESVARAYA INSTITUTE OF TECHNOLOGY
(Approved by AICTE, New Delhi, Affiliated to VTU, Belagavi, ISO 9001:2008 Certified)
Off International Airport Road, Krishnadevaraya Nagar, Bengaluru – 562157

Department of Electrical & Electronics Engineering

DECLARATION

We are here by declare that the project work entitled **"Iot Based Circuit Breaker"** carried out by us and submitted in partial fulfilment for the award of **Bachelor of Engineering in Electrical & Electronics Engineering of the Visvesvaraya Technological University, Belagavi** during the year 2022-2023. The matter embodied in this project work report has not been submitted to any other university or institute for the award of any other degree or diploma.

Place: Bengaluru

Date: 24/05/2023

BALBHIM
1MV19EE027

CHETHANKUMAR SM
1MV19EE031

DILEEP B N
1MV19EE035

SHIVKUMAR
1MV19EE087

VISVESVARAYA TECHNOLOGICAL UNIVERSITY

"Jnana Sangama", Belagavi-590 018

Project Report

on

"SMART WIRELESS EV CHARGING STATION BY SOLAR ENERGY SOURCE"

submitted in partial fulfillment of the requirements for the award of the Degree of

BACHELOR OF ENGINEERING

IN

ELECTRICAL & ELECTRONICS ENGINEERING

Submitted by

AMRUTHA G V	1MV20EE401
ANUPRIYA K V	1MV20EE402
ISHRATH KHUSHBUDA	1MV20EE406
VARUN B BANAKAR	1MV20EE410

Under the Guidance of

Dr. C V MOHAN

Associate Professor

Dept of Electrical and Electronics Engg.

Sir. MVIT, Bengaluru

Department of Electrical & Electronics Engineering

SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGY

(Approved by AICTE New Delhi, Affiliated to VTU, Belagavi, ISO 9001:2008 Certified)

Off International Airport Road, Krishnadevaraya Nagar, Bengaluru – 562157

2022 – 2023

SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGY

(Approved by AICTE New Delhi, Affiliated to VTU, Belagavi, ISO 9001:2008 Certified)

Off International Airport Road, Krishnadevaraya Nagar, Bengaluru – 562157

Department of Electrical & Electronics Engineering

CERTIFICATE

Certified that the project work entitled "SMART WIRELESS EV CHARGING STATION BY SOLAR ENERGY SOURCE" carried out by Ms. ANUSHA G.V, USN 1MV20EE401, Ms. ANUPRIYA K V, USN 1MV20EE402, Ms. [illegible], USN 1MV20EE406, Mr. VARUN B BANAKAR, USN 1MV20EE410, a bonafide students of SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGY, Bengaluru in partial fulfillment for the requirements for the award of the degree of Bachelor of Engineering in Electrical & Electronics Engineering of the Visvesvaraya Technological University, Belagavi during the year 2022-2023. It is certified that all corrections/suggestions indicated for Internal Assessment have been incorporated in the report deposited in the department library. The Project work report has been approved as it satisfies the academic requirements in respect of project work prescribed for the above-mentioned degree.

Signature of Guide	Signature of HOD	Signature of Principal
Dr C V Mohan	Dr Suresh H L	Prof Rakesh S G

EXTERNAL VIVA

Name of Examiners	Signature with Date
1. Dr Suresh H L	
2. Dr Ramaraj - Manpal	

VISVESVARAYA TECHNOLOGICAL UNIVERSITY

"Jnana Sangama", Belagavi-590018

Project Report

on

"DESIGN AND ANALYSIS OF IOT BASED SUBSTATION MONITORING AND CONTROL"

submitted in partial fulfillment of the requirements for the award of the Degree of

BACHELOR OF ENGINEERING

IN

ELECTRICAL & ELECTRONICS ENGINEERING

Submitted by

KUMAR HARSHIT	1MV19EE044
M ASHUTOSH CHANDRA	1MV19EE048
MUNNA BHARDWAJ	1MV19EE059
SAMARJEET KUMAR SANU	1MV19EE082

Under the Guidance of

Ms P. Kezia Joy Kumari

Assistant Professor

Dept. of Electrical and Electronics Engineering,

SIR MVIT, Bengaluru.

Department of Electrical & Electronics Engineering

Sir M VISVESVARAYA INSTITUTE OF TECHNOLOGY

(Approved by AICTE New Delhi, Affiliated to VTU, Belagavi, ISO 9001:2008 Certified)

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2022– 2023

SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGY

(Approved by AICTE, New Delhi. Affiliated to VTU, Belagavi. ISO 9001:2008 Certified)

Off International Airport Road, Krishnadevaraya Nagar, Bengaluru – 562157

Department of Electrical & Electronics Engineering

CERTIFICATE

Certified that the project work entitled "DESIGN AND ANALYSIS OF IOT BASED SUBSTATION MONITORING AND CONTROL" carried out by **KUMAR HARSHIT, USN: 1MV19EE044, M ASHUTOSH CHANDRA, USN: 1MV19EE048, MUNNA BHARDWAJ, USN: 1MV19EE059, SAMARJEET KUMAR SANU, USN: 1MV19EE082** a bonafide students of Sir M. VISVESVARAYA INSTITUTE OF TECHNOLOGY, Bengaluru in partial fulfillment for the requirements for the award of the degree of **Bachelor of Engineering** in **Electrical & Electronics Engineering** of the **Visvesvaraya Technological University**, Belagavi during the year 2022-2023. It is certified that all corrections/suggestions indicated for Internal Assessment have been incorporated in the report deposited in the department library. The project work report has been approved as it satisfies the academic requirements in respect of project work prescribed for the above- mentioned degree.

PRINCIPAL
SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGY
Krishnadevaraya Nagar, International Airport Road, Bangalore-562 157

Signature of Guide	Signature of HOD	Prof. Rakesh S. G.
Ms P. Kezia Joy Kumari	Dr. Suresh H L	

EXTERNAL VIVA

Name of Examiners	Signature with Date
1. Dr. M SURESH H L	24/5/23
2.	24/05/23

VISVESVARAYA TECHNOLOGICAL UNIVERSITY

"Jnana Sangama", Belagavi-590 018

Project Report

on

"ARDUINO BLUETOOTH CONTROLLED ROBOT WITH OBSTACLE DETECTION AND GPS TRACKING"

submitted in partial fulfillment of the requirements for the award of the Degree of

BACHELOR OF ENGINEERING

IN

ELECTRICAL & ELECTRONICS ENGINEERING

Submitted by

AMRUTHA G	1MV19EE015
HARINI P	1MV19EE036
HARISH C	1MV19EE037
M SMRITI	1MV19EE049

Under the Guidance of

Dr. R. SIVAPRIYAN

Associate Professor,

Sir. MVIT, Bengaluru.

Department of Electrical & Electronics Engineering

SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGY

(Approved by AICTE New Delhi, Affiliated to VTU, Belagavi, ISO 9001:2008 Certified)

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2022 – 2023

SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGY

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Off International Airport Road, Krishnadevaraya Nagar, Bengaluru – 562157

Department of Electrical & Electronics Engineering

CERTIFICATE

Certified that the project work entitled "*Arduino Bluetooth Controlled Robot with Obstacle Detection and GPS Tracking*" carried out by **Ms. AMRUTHA G (1MV19EE018), Ms. HARINI P (1MV19EE036), Mr. HARISH C (1MV19EE037), Ms. M SMRITI (1MV19EE049)**, bonafide students of **SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGY, Bengaluru** in partial fulfillment for the requirements for the award of the degree of **Bachelor of Engineering** in ***Electrical & Electronics Engineering*** of the **Visvesvaraya Technological University**, Belagavi during the year **2022-2023**. It is certified that all corrections/suggestions indicated for Internal Assessment have been incorporated in the report deposited in the department library. The Project work report has been approved as it satisfies the academic requirements in respect of project work prescribed for the above-mentioned degree.

PRINCIPAL
SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGY
Krishnadevaraya Nagar, Bengaluru-562 157

Signature of Guide	Signature of HOD	Signature of Principal
Dr. R. Sivapriyan	Dr. Suresh H I	Prof. Rakesh S G

EXTERNAL VIVA

Name of Examiners	Signature with Date
1. Dr. D. S. Suresh	22/5/23
2. Manjula. B. K	22/5/23

SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGY

(Approved by AICTE New Delhi, Affiliated to VTU, Belagavi, ISO 9001:2008 Certified)

Off International Airport Road, Krishnadevaraya Nagar, Bengaluru – 562157

Department of Electrical & Electronics Engineering

DECLARATION

We hereby declare that the project work entitled "**Arduino Bluetooth Controlled Robot with Obstacle Detection and GPS Tracking**" carried out by us and submitted in partial fulfilment for the award of **Bachelor of Engineering in Electrical & Electronics Engineering of the Visvesvaraya Technological University, Belagavi** during the year 2022-2023. The matter embodied in this project report has not been submitted to any other university or institute for the award of any other degree or diploma.

Place: Bengaluru
Date: 22-05-23

Amrutha.G
AMRUTHA G
1MV19EE015

Harini.P
HARINI P
1MV19EE036

HARISH C
1MV19EE037

Smriti
M SMRITI
1MV19EE049

VISVESVARAYA TECHNOLOGICAL UNIVERSITY

"Jnana Sangama", Belagavi-590 018

Project Report

on

"ALL TIME MEDICINE ASSISTANCE AT PUBLIC PLACES"

submitted in partial fulfillment of the requirements for the award of the degree of

BACHELOR OF ENGINEERING

IN

ELECTRICAL & ELECTRONICS ENGINEERING

Submitted by

ANUSHA L	1MV19EE020
NIVEDITHA B S	1MV19EE064
SINDHU T	1MV19EE089
SOWMYA SHREE K	1MV19EE094

Under the Guidance of

Dr. R. SIVAPRIYAN

Associate Professor,

Dept of Electrical and Electronics Engg.,

Sir. MVIT, Bengaluru.

Department of Electrical & Electronics Engineering

SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGY

(Approved by AICTE New Delhi, Affiliated to VTU, Belagavi, ISO 9001:2008 Certified)

Off International Airport Road, Krishnadevaraya Nagar, Bengaluru – 562157

2022 – 2023

SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGY

(Approved by AICTE New Delhi, Affiliated to VTU, Belagavi, ISO 9001:2008 Certified)

Off International Airport Road, Krishnadevaraya Nagar, Bengaluru – 562157

Department of Electrical & Electronics Engineering

CERTIFICATE

Certified that the project work entitled *"All Time Medicine Assistance At Public Places"* carried out by **Ms. ANUSHA L (USN 1MV19EE020), Ms. NIVEDITHA B S (1MV19EE064), Ms. SINDHU T (1MV19EE089), Ms. SOWMYASHREE K (1MV19EE094)**, bonafide students of **SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGY, Bengaluru** in partial fulfillment for the requirements for the award of the degree of **Bachelor of Engineering** in **Electrical & Electronics Engineering** of the **Visvesvaraya Technological University**, Belagavi during the year **2022-2023.** It is certified that all corrections/suggestions indicated for Internal Assessment have been incorporated in the report deposited in the department library. The Project work report has been approved as it satisfies the academic requirements in respect of project work prescribed for the above-mentioned degree.

PRINCIPAL
SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGY
Krishnadevaraya Nagar, Hunasamaranahalli
International Airport Road, Bangalore-562 157

Signature of Guide
Dr. R. Sivapriyan

22/5/23
Signature of HOD
Dr. Suresh H L

Signature of Principal
Prof. Rakesh S G

EXTERNAL VIVA

Name of Examiners	Signature with Date
1. Dr M. S. Suresh	22/5/23
2. Manjula. B.K	

SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGY

(Approved by AICTE New Delhi, Affiliated to VTU, Belagavi, ISO 9001:2008 Certified)

Off International Airport Road, Krishnadevaraya Nagar, Bengaluru – 562157

Department of Electrical & Electronics Engineering

DECLARATION

We hereby declare that the project work entitled "**All Time Medicine Assistance at Public Places**" carried out by us and submitted in partial fulfilment for the award of **Bachelor of Engineering in Electrical & Electronics Engineering of the Visvesvaraya Technological University, Belagavi** during the year 2022-2023. The matter embodied in this project report has not been submitted to any other university or institute for the award of any other degree or diploma.

Place: Bengaluru

Date: 22/05/2023

ANUSHA L

1MV19EE020

NIVEDITHA B S

1MV19EE064

SINDHU T

1MV19EE089

SOWMYASHREE K

1MV19EE094

VISVESVARAYA TECHNOLOGICAL UNIVERSITY

"Jnana Sangama", Belagavi-590 018

Project Report

on

"THREE PHASE TRANSMISSION LINE FAULT ALERT USING ARDUINO"

submitted in partial fulfillment of the requirements for the award of the Degree of

BACHELOR OF ENGINEERING

IN

ELECTRICAL & ELECTRONICS ENGINEERING

Submitted by

AKSHATHA K	1MV20EE400
CHAITRA C	1MV20EE403
SUNIL R	1MV20EE407

Under the Guidance of

Mrs. NANDA M. SHIVAMOGGI
Assistant Professor,
Sir MVIT, Bengaluru.

Department of Electrical & Electronics Engineering

Sir M VISVESVARAYA INSTITUTE OF TECHNOLOGY

(Approved by AICTE New Delhi, Affiliated to VTU, Belagavi, ISO 9001:2008 Certified)

Off International Airport Road, Krishnadevaraya Nagar, Bengaluru – 562157

2022 – 2023

Sir M VISVESVARAYA INSTITUTE OF TECHNOLOGY

(Approved by AICTE New Delhi, Affiliated to VTU, Belagavi, ISO 9001:2008 Certified)

Off International Airport Road, Krishnadevaraya Nagar, Bengaluru – 562157

Department of Electrical & Electronics Engineering

CERTIFICATE

Certified that the project work entitled "*Three Phase Transmission Line Fault Alert Using Arduino*" carried out by **Ms. AKSHATHA K, USN 1MV20EE400, Ms. CHAITRA C, USN 1MV20EE403, Mr. SUNIL R, USN 1MV20EE407** a bonafide students of **Sir M VISVESVARAYA INSTITUTE OF TECHNOLOGY, Bengaluru** in partial fulfillment for the requirements for the award of the degree of **Bachelor of Engineering** in **Electrical & Electronics Engineering** of the **Visvesvaraya Technological University**, Belagavi during the year **2022-2023.** It is certified that all corrections/suggestions indicated for Internal Assessment have been incorporated in the report deposited in the department library. The Project work reporthas been approved as it satisfies the academic requirements in respect of project work prescribed for the above-mentioned degree.

PRINCIPAL
SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGY
Krishnadevarayanagar, Hunasamaranahalli
International Airport Road, Bangalore-562 157

Signature of Guide	**Signature of HOD**	**Signature of Principal**
Mrs. Nanda M. Shivamoggi	Dr. Suresh H L	Prof. Rakesh S G

EXTERNAL VIVA

Name of Examiners	**Signature with Date**
1. Dr SURESH. H.L	26/5/23
2. Dr. N Ramarao – Rao	26/05/23

VISVESVARAYA TECHNOLOGICAL UNIVERSITY

"Jnana Sangama", Belagavi-590 018

Project Report phase-II

on

"SOLAR POWERED IOT BASED WEATHER STATION"

submitted in partial fulfillment of the requirements for the award of the Degree of

BACHELOR OF ENGINEERING

IN

ELECTRICAL & ELECTRONICS ENGINEERING

Submitted by

D K SHASHANK	1MV19EE032
MANJUNATHA	1MV19EE051
PRAVEENKUMAR	1MV19EE070
SONAL KUMAR	1MV19EE091

Under the Guidance of

Mr. SIDDAPPAJI M R

Assistant Professor,

Dept of Electrical and Electronics Engineering, Sir. MVIT, Bengaluru

Department of Electrical & Electronics Engineering

SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGY

(Approved by AICTE New Delhi, Affiliated to VTU, Belagavi, ISO 9001:2008 Certified)

Off International Airport Road, Krishnadevaraya Nagar, Bengaluru – 562157

2022 – 2023

SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGY

(Approved by AICTE New Delhi, Affiliated to VTU, Belagavi, ISO 9001:2008 Certified)

Off International Airport Road, Krishnadevaraya Nagar, Bengaluru – 562157

Department of Electrical & Electronics Engineering

CERTIFICATE

Certified that the project work entitled *"Solar Powered Iot Based Weather Station "* carried out by **Mr. D K SHASHANK (USN 1MV19EE032), Mr. MANJUNATHA (1MV19EE051), Mr. PRAVEENKUMAR (1MV19EE070), Mr. SONAL KUMAR (1MV19EE091)**, bonafide students of **SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGY, Bengaluru** in partial fulfillment for the requirements for the award of the degree of **Bachelor of Engineering** in **Electrical & Electronics Engineering** of the **Visvesvaraya Technological University**, Belagavi during the year **2022-2023**. It is certified that all corrections/suggestions indicated for Internal Assessment have been incorporated in the report deposited in the department library. The Project work report has been approved as it satisfies the academic requirements in respect of project work prescribed for the above-mentioned degree.

Signature of Guide	**Signature of HOD**	**Signature of Principal**
Mr. Siddappaji M R	Dr. Suresh H L	Prof. Rakesh S G

PRINCIPAL
SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGY
Krishnadevarayanagar, Hunasamaranahalli
International Airport Road, Bangalore-562 157

EXTERNAL VIVA

Name of Examiners	**Signature with Date**
1. Dr SURESH HL	25/5/23
2. Dr N Ramarao — Rao	25/05/23

SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGY
(Approved by AICTE New Delhi, Affiliated to VTU, Belagavi, ISO 9001:2008 Certified)
Off International Airport Road, Krishnadevaraya Nagar, Bengaluru – 562157

Department of Electrical & Electronics Engineering

DECLARATION

We hereby declare that the project work entitled **"Solar Powered Iot Based Weather Station"** carried out by us and submitted in partial fulfilment for the award of **Bachelor of Engineering in Electrical & Electronics Engineering of the Visvesvaraya Technological University, Belagavi** during the year 2022-2023. The matter embodied in this project report has not been submitted to any other university or institute for the award of any other degree or diploma.

Place: Bengaluru
Date: 26-05-2023

D K SHASHANK
1MV19EE032

MANJUNATHA
1MV19EE061

PRAVEENKUMAR
1MV19EE070

SONAL KUMAR
1MV19EE091

VISVESVARAYA TECHNOLOGICAL UNIVERSITY

"Jnana Sangama", Belagavi-590 018

Project Report

on

"REMOTE SPEED CONTROL AND MONITORING OF SINGLE PHASE INDUCTION MOTOR BY IOT"

Submitted in partial fulfillment of the requirements for the award of the Degree of

BACHELOR OF ENGINEERING

IN

ELECTRICAL & ELECTRONICS ENGINEERING

Submitted by

KUSHAL K C	1MV19EE047
SRIKANTH M	1MV19EE096
THARUN G	1MV19EE103
VENU M G	1MV19EE105

Under the Guidance of

Dr. C V Mohan

Associate Professor

Sir. MVIT, Bengaluru

Department of Electrical & Electronics Engineering

Sir M. VISVESVARAYA INSTITUTE OF TECHNOLOGY

(Approved by AICTE New Delhi, Affiliated to VTU, Belagavi, ISO 9001:2008 Certified)

Off International Airport Road, Krishnadevaraya Nagar, Bengaluru – 562157

2022 – 2023

Sir M. VISVESVARAYA INSTITUTE OF TECHNOLOGY

(Approved by AICTE New Delhi, Affiliated to VTU, Belagavi, ISO 9001:2008 Certified)

Off International Airport Road, Krishnadevaraya Nagar, Bengaluru – 562157

Department of Electrical & Electronics Engineering

CERTIFICATE

Certified that the project work entitled "**Remote Speed Control And Monitoring Of Single Phase Induction Motor By IOT**" carried out by **Mr. Kushal K C, USN 1MV19EE047, Mr. Srikanth M, USN 1MV19EE096, Mr. Tharun G, USN 1MV19EE103, Mr. Venu M G, USN 1MV19EE105** a bonafide students of **Sir M. VISVESVARAYA INSTITUTE OF TECHNOLOGY, Bengaluru** in partial fulfillment for the requirements for the award of the degree of **Bachelor of Engineering** in **Electrical & Electronics Engineering** of the **Visvesvaraya Technological University**, Belagavi during the year **2022-2023.** It is certified that all corrections/suggestions indicated for Internal Assessment have been incorporated in the report deposited in the department library. The Project work report has been approved as it satisfies the academic requirements in respect of project work prescribed for the above mentioned degree.

Signature of Guide Dr. C V Mohan	**Signature of HOD** Dr. Suresh H L	PRINCIPAL SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGY Krishnadevaraya Nagar, Bengaluru-562157 **Signature of Principal** Prof. Rakesh S L

EXTERNAL VIVA

Name of Examiners	**Signature with Date**
1. DR SURESH H-L	26/5/23
2. Dr N Ranavat — N Rao	26/05/23

VISVESVARAYA TECHNOLOGICAL UNIVERSITY

"Jnana Sangama", Belagavi-590018

Project Report

on

"HUMAN DETECTION BASED ON IOT USING BLUETOOTH HC-05"

submitted in partial fulfillment of the requirements for the award of the degree of

BACHELOR OF ENGINEERING

IN

ELECTRICAL & ELECTRONICS ENGINEERING

Submitted by

ABHIJEET ANAND	1MV19EE002
ASHISH KUMAR TIWARY	1MV19EE022
SAGNIK CHAKRABORTY	1MV19EE080
SAYAN BID	1MV19EE086

Under the Guidance of

Dr. M.S. Suresh

Professor

Dept. of Electrical and Electronics Engineering,

SIR MVIT, Bengaluru.

Department of Electrical & Electronics Engineering

Sir M VISVESVARAYA INSTITUTE OF TECHNOLOGY

(Approved by AICTE New Delhi, Affiliated to VTU, Belagavi, ISO 9001:2008 Certified)

Off International Airport Road, Krishnadevaraya Nagar, Bengaluru – 562157

2022– 2023

SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGY

(Approved by AICTE New Delhi, Affiliated to VTU, Belagavi, ISO 9001:2008 Certified)

Off International Airport Road, Krishnadevaraya Nagar, Bengaluru – 562157

Department of Electrical & Electronics Engineering

CERTIFICATE

Certified that the project work entitled "HUMAN DETECTION BASED ON IOT USING BLUETOOTH HC-05" carried out by **ABHIJEET ANAND, USN: 1MV19EE002, ASHISH KUMAR TIWARY, USN: 1MV19EE022, SAGNIK CHAKRABORTY, USN: 1MV18EE080, SAYAN BID USN: 1MV19EE086** a bonafide students of **Sir M. VISVESVARAYA INSTITUTE OF TECHNOLOGY, Bengaluru** in partial fulfillment for therequirements for the award of the degree of **Bachelor of Engineering** in **Electrical & Electronics Engineering** of the **Visvesvaraya Technological University,** Belagavi during the year **2022-2023.** It iscertified that all corrections/suggestions indicated for Internal Assessment have been incorporated in thereport deposited in the department library. The project work report has been approved as it satisfies the academic requirements in respect of project work prescribed for the above- mentioned degree.

26/5/23	26/5/23	PRINCIPAL SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGY Krishnadevarayanagar, Hunasamaranahalli International Airport Road, Bangalore-562 157
Signature of Guide	**Signature of HOD**	**Signature of Principal**
Dr. M.S. Suresh	Dr. Suresh H L	Prof. Rakesh B.G.

EXTERNAL VIVA

Name of Examiners	**Signature with Date**
1. Dr SURESH. H'L	26/5/23
2. Dr N Ramarao	26/05/23

SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGY

(Approved by AICTE New Delhi, Affiliated to VTU, Belagavi, ISO 9001:2008 Certified)

Off International Airport Road, Krishnadevaraya Nagar, Bengaluru-562157

Department of Electrical & Electronics Engineering

DECLARATION

We are hereby declaring that the project work entitled **"HUMAN DETECTION BASED ON IOT USING BLUETOOTH HC-05"** carried out by us and submitted in partial fulfilment for the award of **Bachelor of Engineering in Electrical & Electronics Engineering of the Visvesvaraya Technological University, Belagavi** during the year 2022-2023. The matter embodied in this project work report has not been submitted to any other university or institute for the award of any other degree or diploma.

Place: Bengaluru

Date: 19/05/2023

ABHIJEET ANAND

1MV19EE002

ASHISH KUMAR TIWARY

1MV19EE022

SAGNIK CHAKRABORTY

1MV19EE080

SAYAN

1MV19EE086

SRI KRISHNADEVARAYA EDUCATIONAL TRUST'S
SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGY
Krishnadevarayanagar, Hunasamaranahalli, Off International Airport Road, Bangalore-562 157
(Affiliated to Visvesvaraya technological university, recognised by AICTE& Accredited by National Board of Accreditation, New Delhi. An ISO 9001:2008 Certified Institution.)
Ph: 080-2846 7248/2847 7024/25/26 Fax: 080-28467081
E-mail:principal@sirmvit.edu,sirmvitbgl@gmail.com,Web:www.sirmvit.edu
DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

LIST OF STUDENTS INTERNSHIP TRAINING DETAILS

ACADEMIC YEAR 2022-23

Sl. No	NAME	COMPANY	DATES	TITLE OF THE WORK
1	AVART KASHYAP	HARMONIZER	21/08/2022 to 20/09/2022	VIBRATION OF ELECTRICAL MOTOR USING IIOT
2	ANANYA AMRIT	HARMONIZER	21/08/2022 to 20/09/2022	METHOD TO DETECT, MEASURE,ANALYZE TEMPERATURE, VIBRATION OF ELECTRIC MOTOR USING IOT AND MACHINE LEARNING TECHNOLOGIES
3	SAIYMEEN FATIMA	HARMONIZER	21/08/2022 to 20/09/2022	METHOD TO DETECT, MEASURE, ANALYZE TEMPERATURE, VIBRATION OF ELECTRIC MOTOR USING IIOT AND MACHINE LEARNING TECHNOLOGIES.
4	RIYANSHA DANGI	GE HEALTHCARE	21/08/2022 to 20/09/2022	PQ VARIATION ANALYSIS
5	SOWMYASHREE K	HARMONIZER	21/08/2022 to 20/09/2022	METHOD TO DETECT, MEASURE AND ANALYSE TEMPERATURE
6	ROHAN KEDIA	HARMONIZER	21-08-2022 to 20-09-2022	AND VIBRATION OF ELECTRIC MOTOR USING IOTÂ€ •
7	ALI AHMED	HARMONIZER	21/08/22 to 20/09/22	METHOD TO DETECT, MEASURE, ANALYZE TEMPERATURE, VIBRATION OF ELECTRIC MOTOR
8	NILESH SAHAY	HARMONIZER	21 Aug 2022 to 20 Sep 2022	USING IIOT AND MACHINE LEARNING TECHNOLOGIES

9	TANYA SINGH	HARMONIZER	21/08/2022 to 20/09/2022	METHOD TO DETECT,MEASURE AND ANALYSE TEMPERATURE
10	SINGARAYANI LOHITH ROYAL	HARMONIZER	21/08/2022 to 20/09/2022	METHOD TO DETECT, MEASURE, ANALYZE TEMPERATURE, VIBRATION OF ELECTRIC MOTOR USING IIOT AND MACHINE LEARNING TECHNOLOGIES
11	SONAL KUMAR	HARMONIZER	22-8-2022 to 20-9-2022	METHOD TO DETECT, MEASURE , ANALYSIS OF TEMPERATURE , VIBRATION OF MOTOR USING IIOT AND ML TECHNOLOGIES
12	AAYUSH	EYYANI ELECTRIC MACHINES PVT. LTD.	22/08/2022 to 23/09/2022	DESIGN A LOW VOLTAGE MOTOR WINDING
13	VARUN B BANAKAR	HARMONIZER	21/08/22 - 20/09/22	METHOD TO DETECT, MEASURE, ANALYZE TEMPERATURE , VIBRATION OF ELECTRIC MOTOR USING IIOT AND ML TECHNOLOGIES
14	AGRANI DEEPAK	EYYANI ELECTRIC MACHINES PVT. LTD.	22/08/2022 to 23/09/2022	DESIGNING OF EXTERNAL ROTOR MOTOR AND VARIOUS BLOWER TESTING
15	ISHRATH KHUSHBUDA	HARMONIZER	21-8-21 to 20-9-21	METHOD TO DETECT, MEASURE, ANALYSIS OF TEMPERATURE AND VIBRATION OF ELECTRIC MOTOR USING IOT.
16	MOHAMMED ARHAAN PASHA	HARMONIZER	24/08/23 to 23/09/23	METHOD TO DETECT , MEASURE, ANALYSE TEMPERATURE AND VIBRATION OF ELECTRIC MOTOR USING IOT
17	YESHWANTH RAJ	HARMONIZER	21/08/2022 to 20/09/2022	"METHOD TO DETECT,MEASURE,ANALYSE TEMPERATURE OF ELECTRIC MOTOR USING IIOT AND ML TECHNIQUE"
18	SYED IRFAN	HARMONIZER	21/08/2022 to 20/09/2022	METHOD TO DETECT, MEASURE AND ANALYZE

				THE TEMPERATURE AND VIBRATION OF MOTOR
19	CHARAN PB	HARMONIZER	24/08/2022 to 23/09/2022	METHOD TO DETECT, MEASURE, ANALYSE TEMPERATURE, VIBRATION OF ELECTRIC MOTOR USING IIOT AND MACHINE LEARNING TECHNOLOGIES
20	ANUPRIYA K V	HARMONIZER	24/08/2022 to 23/09/2022	METHOD TO DETECT, MEASURE, ANALYSIS OF TEMPERATURE, VIBRATION OF ELECTRIC MOTOR USING IOT
21	KUSHAGRA DEEPAK	EYYANI ELECTRIC MACHINES PVT. LTD.	22/08/2022 to 23 /09/2022	DESIGNING OF MOTOR WINDING AND VARIOUS TESTING
22	ISHA ASTHANA	AMPHENOL OMNICONNECT INDIA LTD	22/08/2022 to 10/09/2022	MANUFACTURING OF CABLE ASSEMBLY AND POWER DISTRIBUTION UNIT (PDU)
23	HARSH PRAKASH	HARMONIZER	21/08/2022 to 20/09/2022	METHOD TO DETECT,MEASURE,ANALYSIS OF TEMPERATURE,VIBRATION OF MOTOR USING IIOT AND ML TECHNOLOGY
24	SWAPNA. N	HARMONIZER	21-08-2022 to 20-09-2022	"METHOD TO DETECT, MEASURE, ANALYSE TEMPERATURE, VIBRATION OF ELECTRIC MOTOR USING IOT"
25	SANGAMESH JUNTPALLY	KAILASH TRANSFORMER Pvt. Ltd.	21/08/2022 to 10/09/2022	STUDY ON MANUFACTURING OF TRANSFORMER
26	DADI JASHWANTH KUMAR	JSW ENERGY	22/08/22 to 24/09/22	WORKING OF A THERMAL POWER PLANT AND ITS COMPONENTS
27	HARISH C	HARMONIZER	23/08/22 to 24/09/22	METHOD TO DETECT, MEASURE AND ANALYSE TEMPERATURE AND VIBRATION OF ELECTRIC MOTOR USING IOT
28	SREEJITH C S	HARMONIZER	24/08/2022 to 23/09/2022	METHOD TO DETECT, MEASURE AND ANALYSE TEMPERATURE AND

				VIBRATION OF ELECTRIC MOTOR USING IOT
29	PRATYUSH RAJ PANDEY	HARMONIZER	21/08/2022 to 20/09/2022	METHOD TO DETECT, MEASURE,ANALYZE TEMPERATURE, VIBRATION OF ELECTRIC MOTOR USING 30IIOT AND MACHINE LEARNING.
30	KAUSHIKI	HARMONIZER	21/08/2022 to 20/09/2022	METHODS TO DETECT, MEASURE, ANALYSE TEMPERATURE AND VIBRATION OF ELECTRIC MOTORS USING IIOT AND MACHINE LEARNING TECHNOLOGIES
31	SRIKANTH M	HARMONIZER	24/08/2022 to 23/09/2022	METHOD TO DETECT,MEASURE, ANALYSIS OF TEMPERATURE, VIBRATION OF ELECTRIC MOTOR USING IOT
32	SOUMICK MAJUMDAR	Autodesk	21/08/2022 to 21/09/2022	HYBRID ELECTRIC VEHICLE DESIGN
33	KUNAL KUMAR	EYYANI ELECTRIC MACHINES (P) LTD	22-08-2022 to 23-09-2022	DESIGN A LOW VOLTAGE MOTOR ROTOR AND STATOR.
34	REET GUPTA	HARMONIZER	19/8/22 to 21/9/22	MEASURE,ANALYSE THE VIBRATION AND TEMPERATURE OF ELECTRIC MOTOR WITH IOT AND MACHINE LEARNING
35	ANMOL ANAND	HARMONIZER	19/8/22 to 21/9/22	MEASURE,ANALYSE TEMPERATURE AND VIBRATION OF ELECTRIC MOTOR WITH IOT AND MACHINE LEARNING TECHNIQUES
36	PRAVEENKUMAR	KAILASH TRANSFORME R Pvt. Ltd.	21-08-2022 to 10-09-2022	STUDY ON MANUFACTURING OF TRANSFORMERS
37	AKSHARHA K	HARMONIZER	24/08/2022 to 23/09/2022	METHOD TO DETECT, MEASURE, ANALYSIS OF TEMPERATURE, VIBTRATION OF MOTOR USING IOT

38	DILEEP B.N	HARMONIZER	21/08/2022 to 20/09/2022	METHOD TO DETECT,MEASURE,ANALYSE TEMPERATURE,VIBRATION OF ELECTRIC MOTOR USING IIOT AND MACHINE LEARNING TECHNOLOGIES
39	CHAITRA C	HARMONIZER	24-08-2022 to 23-09-2022	HARMONIZER INDIA PVT LIMITED
40	VINAYAKA NM	KPTCL	22/08/2022 to 12/09/2022	STUDY OF SUBSTATION
41	ROHAN YOGESH GOWDAR	KPTCL	22/08/2022 to 12/09/2022	STUDY OF SUBSTATION
42	VILAS	GESCOM	05-09-2022 to 30-09-2022	STUDY OF SUBSTATION
43	ROHITH CH	BEL	01/09/2022 to 20/09/2022	DESIGN AND SIMULATION OF FLYBACK CONVERTOR
44	HARSHIT AGNIHOTRI	BEL	01/09/2022 to 20/09/2022	DESIGN AND SIMULATION OF FLYBACK CONVERTER
45	HARINI P	BMRCL	15/8/2022 to 22/9/2022	ANALYSIS AND WORKING OF ROLLING STOCK, TRACTION AND POWER SUPPLY IN BMRCL
46	MEGHANA V	BMRCL	22.08.2022 to 15.09.2022	ANALYSIS AND WORKING OF ROLLING STOCK, TRACTION AND POWER SUPPLY IN BMRCL
47	ADITHYA DEEKSHITH	BEL	29/8/2022 to 28/9/2022	ELECTRONICS WARFARE AND AVIONICS
48	VENU MG	KPTCL	23/08/2022 to 17/09/2022	STUDY OF SUBSTATION EQUIPMENT
49	PRANAV KUMAR	ONGCL	07/09/2022 to 06/10/2022	STUDY OF POWER SYSTEM AT ONGC
50	SUYESHA BHATTACHARJEE	HARMONIZER	21/08/2022 to 20/09/2022	METHOD TO DETECT, MEASURE, ANALYZE TEMPERATURE AND VIBRATION OF ELECTRIC MOTOR USING IIOT AND MACHINE LEARNING TECHNOLOGIES
51	TAMMANNA	AIROBOSOFT	25/08/2022 to 25/09/2022	EMBEDDED SYSTEM AND IOT

52	NIVEDITHA B S	BEL	7/9/2022 to 6/10/2022	OVERVIEW OF NAVAL SYSTEM
53	BALAJI S	BEL	29-08-2022 to 28-09-2022	OVERVIEW OF ADVANCE DEFENCE SYSTEM NAVY
54	SINDHU T	BEL	24/08/2022 to 23/09/2022	OVERVIEW OF NAVAL SYSTEMS
55	ASHIV CHANDRANKUNNEL SANJEEV	BMRCL	22/08/2022 to 17/09/2022	ANALYSIS AND WORKING OF ROLLING STOCK, TRACTION, POWER SUPPLY AND PROTECTIONS USED IN BMRCL.
56	HARSHITHA S REDDY	BEL	7/9/2022 to 6/10/2022	NAVAL SYSTEMS
57	BALBHIM	KPTCL	7/9/2022 to 6/10/2022	STUDY OF SUBSTATION
58	ZIKRA RAHMAN	PVUNL	21.08.2022 to 10.09.2022	VOCATIONAL TRAINING IN NTPC LTD.
59	ZIKRA RAHMAN	PVUNL	21.08.2022 to 10.09.2022	VOCATIONAL TRAINING IN NTPCL
60	SANDEEP KUMAR	BSNL	05/09/2022 to 28/09/2022	PLC AND ITS PROGRAMING
61	PANKAJ A CHAVAN	GESCOM	05/09/2022 to 30/09/2022	STUDY OF SUBSTATION
62	SUSHMA HIREMATH	BEL	24/09/2022 to 23/10/2022	OVERVIEW OF MISSIEL SYSTEM
63	PRASHANTH NOOLVI	BEL	15/09/2022 to 14/10/2022	OVERVIEW OF STRATEGIC COMMUNICATIONS AND UNMANNED SYSTEMS
64	NAVEEN A MURALE	KPTCL	29/08/2022 to 15/09/2022	STUDY OF SUBSTATION
65	SATHISH G K	BEL	15/09/2022 to 14/10/2022	OVERVIEW ON STRATEGIC COMMUNICATIONS AND UNMANNED SYSTEMS
66	MOHD JUNAID	BESCOM	22-08-2022 to10-09-2022	STUDY OF TRANSFORMER REPAIR CENTRE, ENERGY METER CALIBRATION AND AN OVERVIEW OF SUBSTATION.
67	RAHUL N	BEL	24/08/2022 to 23/09/2022	OVERVIEW OF MISSILE SYSTEM

68	ROHITH CH	BEL	01/09/2022 to 20/09/2022	DESIGN AND SIMULATION OF FLYBACK CONVERTOR
69	M SMRITI	HAL	01-09-2022 to 28-09-2022	ANALYSIS AND TESTS ON VARIOUS AIRCRAFTS
70	SATYAM	NTPC	24-08-3022 to 23-09-2022	INDUSTRIAL TRAINING
71	D K SHASHANK	GESCOM	05/09/22 to 30/09/22	GULBARGA ELECTRICITY SUPPLY COMPANY LIMITED
72	D K SHASHANK	GESCOM	05/09/22 to 30/09/22	GULBARGA ELECTRICITY SUPPLY COMPANY LIMITED
73	RAHUL N M	KPTCL	21/08/2022 to 17/09/2022	STUDY OF SUBSTATION
74	PRAMOD M	KPTCL	23/08/2022 - 14/09/2022	STUDY ON SUBSTATION EQUIPMENTS
75	DHARNEESH R	BEL	07-11-2022 to 06-12-2022	OVERVIEW OF ENGINEERING SERVICES.
76	AMRUTHA G	JHAL	01/9/2022 to 28/9/2022	ANALYSIS AND TESTS ON VARIOUS AIRCRAFTS
77	ARUN. M	HAL	01/09/2022 to 28/09/2022	ANALYSIS AND TESTS ON VARIOUS AIRCRAFT
78	ANUSHA L	BEL	24-08-23 to23-09-23	OVERVIEW OF NAVAL SYSTEM

Project Coordinator

PROF. & HEAD
DEPT. OF ELECTRICAL & ELECTRONICS ENGG.
SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGY
Krishnadevarayanagar, Hunasemaranahalli
(Via) Yelahanka, Bengaluru - 562 157

भारत संचार निगम लिमिटेड

(भारत सरकार का उपक्रम)

BHARAT SANCHAR NIGAM LIMITED

(A Govt. of India Enterprises)

Training Cell O/o The Principal General Manager, Patna Telecom District, Patna.

No.: PTD/ Vocational Training/ Cert/ 2022-23/89 Date: 28.09.2022

This is to certify that Mr./Ms SANDEEP KUMAR

S/o D/o/ Sri/ Smt AKHILESHWER PRASAD SINGH

Student of (College) SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGY, BENGALURU has undergone 02 (Two) /04 (Four) /06 (Six) Weeks 03(THREE)

in-plant Vocational Training for B.TECH(E.E.E) Student w.e.f 05.09.2022.

at BSNL Patna Telecom District, Patna.

Wishing every success in your career

28/9/22

Asst. General Manager (Mktg.)
O/o The PGMTD, Patna

For any query contact : Training cell, Patna Telephones.
Ph: 0612-2506096, 2506575
Email : cmsalesptd@gmail.com

भारत इलेक्ट्रॉनिक्स
BHARAT ELECTRONICS

Skill India
कौशल भारत - कुशल भारत

CENTRE FOR LEARNING AND DEVELOPMENT

BHARAT ELECTRONICS LIMITED
(A Govt. of India Enterprise, Ministry of Defence)
Jalahalli Post, Bengaluru - 560 013, India

Certificate

This is to certify that

Sri./Smt/Kum . Adithya . . Deekshith . . . . . .

Ref No. 1410/CLD/HR/2022-23/27/242 . . . . . .

student of . Sir. M. Visvesvaraya . Institute . of . . . .

. . . . . Technology . . . Bengalore . . . . . .

carried out Project Work/Internship on . Overview . . Of .

. . . . . Electronics . Warfare . . And . . Avionics . . . . .

. . . . . .

in . . . Electronics . Warfare . . And . . Avionics . . . . .

SBU/CSG of BEL, Bengaluru from . . . 29 . . Aug . 2022 . . .

to . . 28 . . Sep . . 2022 . . .

He/She was regular and punctual in his/her attendance and his/her conduct was satisfactory during the period.

Project / Internship Guide

Date : 28/09/2022

Place : Bengaluru

Head (HR/CLD)

MANAGER (HR/CLD)
BHARAT ELECTRONICS LTD.
JALAHALLI POST, BANGALORE-560 013

Harmonizer
Clarity Everywhere

Certificate of Internship

This is to Certify that

ADITYA KUMAR, ***6th Semester-EEE at sir.MVIT***

has attended the Internship program conducted by Harmonizer India Pvt Ltd.,

---

Method to detect, measure, analyze Temperature, Vibration of Electric motor using IIoT and Machine Learning technologies

21st Aug – 20th Sept 2022

M.R.Srinivas - CTO

Harmonizer
Clarity Everywhere

Certificate of Internship

This is to Certify that

ALI AHMED, *6th Semester-EEE at Sir.MVIT*

has attended the Internship program conducted by Harmonizer India Pvt Ltd.,

---

Method to detect, measure, analyze Temperature, Vibration of Electric motor using IIoT and Machine Learning technologies

21st Aug – 20th Sept 2022

M.R.Srinivas - CTO

Harmonizer
Clarity Everywhere

Certificate of Internship

This is to Certify that

AMAN KUMAR, *6th Semester-EEE at sir.MVIT*

has attended the Internship program conducted by Harmonizer India Pvt Ltd.,

---

Method to detect, measure, analyze Temperature, Vibration of Electric motor using IIoT and Machine Learning technologies

21st Aug – 20th Sept 2022

M.R.Srinivas - CTO

Harmonizer
Clarity Everywhere

Certificate of Internship

This is to Certify that

AMAN SINGH, *6th Semester-EEE at sir.MVIT*

has attended the Internship program conducted by Harmonizer India Pvt Ltd.,

---

Method to detect, measure, analyze Temperature, Vibration of Electric motor using IIoT and Machine Learning technologies

21st Aug – 20th Sept 2022

M.R.Srinivas - CTO

ನ ಸಂಶೋಧನೆ ಮತ್ತು ವಿನ್ಯಾಸ ಕೇಂದ್ರ(ಎ ಆರ್ ಡಿ ಸಿ)
ान अनुसंधान एवं अभिकल्प केन्द्र (ए आर डी सी)
IRCRAFT RESEARCH & DESIGN CENTRE (ARDC)
ವಿನ್ಯಾಸ ಸಂಕೀರ್ಣ / अभिकल्प कॉम्प्लेक्स / DESIGN COMPLEX
ಏರೋನಾಟಿಕ್ಸ್ ಲಿಮಿಟೆಡ್
हिन्दुस्तान एरोनॉटिक्स लिमिटेड
HINDUSTAN AERONAUTICS LIMITED

ಮಾರತ್ತ ಹಳ್ಳಿ ಪೋಸ್ಟ್, ಬೆಂಗಳೂರು-560037, ಭಾರತ
मारतहल्ली पोस्ट, बेंगलूरु - 560037, भारत
Marathahalli Post, Bengaluru - 560037, India
ದೂ / दूरभाष / Ph.: 91 - 80 - 22324312, 22316774
ಫ್ಯಾಕ್ಸ್ / फैक्स / Fax: 91 - 80 - 22314320

D/ARDC/HR/Proj/Cert/6914/22

28.09.2022

CERTIFICATE

This is to certify that **Ms. Amrutha G (USN No. 1MV19EE015)** who is a student of B.E (Electrical & Electronics Engg), Sir M Visvesvaraya Institute of Technology, Bangalore, has undergone **Internship Training** at HAL ARDC, Design Complex, Bengaluru from 01-09-2022 to 28-09-2022 on **"No-Pay-No-Fee-Basis".** She has been punctual, sincere and committed trainee. Her conduct has been found Excellent.

2. The student brings in a lot of energy and enthusiasm in the work, she is structured in her approach and methodical in resolving a problem. She is resourceful and adaptive to working environment.

(Ramesh K)
Chief Manager (HR)
ARDC, Design Complex.

CAMPALIN

CERTIFICATE

OF INTERNSHIP

THIS CERTIFICATE IS PROUDLY PRESENTED TO

Ananya Amrit

has sucessfully completed **Internet of Things** in association with **Campalin** from **01-09-2022** to **30-10-2022**

25-11-2022

DATE

SIGNATURE

Certificate ID: CAMP1355

ಭಾರತ್ ಎಲೆಕ್ಟ್ರಾನಿಕ್ಸ್
भारत इलेक्ट्रॉनिक्स
BHARAT ELECTRONICS
QUALITY, TECHNOLOGY, INNOVATION

Skill India
कौशल भारत - कुशल भारत

CENTRE FOR LEARNING AND DEVELOPMENT

BHARAT ELECTRONICS LIMITED
(A Govt. of India Enterprise, Ministry of Defence)
Jalahalli Post, Bengaluru - 560 013, India

Certificate

This is to certify that

Sri./Smt/Kum ANUSHA .L.....

Ref No. 1410/CLD/HR/2022-23/27/223.....

student of SIR .M. VISVESVARAYA. INSTITUTE .OF.....

..TECHNOLOGY...BANGALORE.....

carried out Project Work/Internship on OVERVIEW....

....OF. NAVAL .SYSTEM[SONAR .AND. COMMUNICATION.

.....SYSTEM].....

in NAVAL.SYSTEM[SONAR .AND. COMMUNICATION SYSTEM]

SBU/CSG of BEL, Bengaluru from .24. .AUG. 2022.....

to .23. SEP. 2022.....

He/She was regular and punctual in his/her attendance and his/her conduct was satisfactory during the period.

विनीता

Project / Internship Guide

Date : 23-09-2022
Place : Bengaluru

Head (HR/CLD)
सुजाता फ्रांसिस / SUJATHA FRANCIS
प्रबंधक (मा. सं / सी एल डी)
MANAGER (HR/CLD)
भारत इलेक्ट्रॉनिक्स लिमिटेड
BHARAT ELECTRONICS LTD.
जालहल्ली पोस्ट, बेंगलूरु-560 013

ವಿಮಾನ ಸಂಶೋಧನೆ ಮತ್ತು ವಿನ್ಯಾಸ ಕೇಂದ್ರ(ಎ ಆರ್ ಡಿ ಸಿ)
विमान अनुसंधान एवं अभिकल्प केन्द्र (ए आर डी सी)
AIRCRAFT RESEARCH & DESIGN CENTRE (ARDC)
ವಿನ್ಯಾಸ ಸಂಕೀರ್ಣ / अभिकल्प कॉम्प्लेक्स / DESIGN COMPLEX
ಹಿಂದೂಸ್ತಾನ್ ಏರೋನಾಟಿಕ್ಸ್ ಲಿಮಿಟೆಡ್
हिन्दुस्तान एरोनॉटिक्स लिमिटेड
HINDUSTAN AERONAUTICS LIMITED

ಮಾರತ್ತ್ ಹಳ್ಳಿ ಪೋಸ್ಟ್, ಬೆಂಗಳೂರು-560037, ಭಾರತ
मारतहल्ली पोस्ट, बेंगलूरु-560037, भारत
Marathahalli Post, Bengaluru-560037, India
ದೂ/दूरभाष/Ph.: 91-80-22324312,22316774
ಫ್ಯಾಕ್ಸ್/फैक्स/Fax:91-80-22314320

D/ARDC/HR/Proj/Cert/6914/22

28.09.2022

CERTIFICATE

This is to certify that **Mr. Arun M (USN No. 1MV19EE021)** who is a student of B.E (Electrical & Electronics Engg), Sir M Visvesvaraya Institute of Technology, Bangalore, has undergone **Internship Training** at HAL ARDC, Design Complex, Bengaluru from 01-09-2022 to 28-09-2022 on **"No-Pay-No-Fee-Basis".** He has been punctual, sincere and committed trainee. His conduct has been found Excellent.

2. The student brings in a lot of energy and enthusiasm in the work, he is structured in his approach and methodical in resolving a problem. he is resourceful and adaptive to working environment.

(Ramesh K)
Chief Manager (HR)
ARDC, Design Complex.

www.hal-india.co.in

ಬೆಂಗಳೂರು ಮೆಟ್ರೋ ರೈಲ್ ನಿಗಮ ನಿಯಮಿತ
(ಕರ್ನಾಟಕ ಸರ್ಕಾರ ಹಾಗೂ ಕೇಂದ್ರ ಸರ್ಕಾರ ಸಹಭಾಗಿತ್ವದ ಉದ್ಯಮ)
ನೋಂದಾಯಿತ ಕಚೇರಿ : ಬಿ.ಎಂ.ಟಿ.ಸಿ. ಕಾಂಪ್ಲೆಕ್ಸ್, 3ನೇ ಮಹಡಿ, ಕೆಂಗಲ್ ಹನುಮಂತಯ್ಯ ರಸ್ತೆ, ಶಾಂತಿನಗರ
ಬೆಂಗಳೂರು - 560 027, ಭಾರತ

namma metro
ನಮ್ಮ ಮೆಟ್ರೋ

Bangalore Metro Rail Corporation Ltd.
(A Joint Venture of Government of Karnataka & Government of India)
Regd. Office : B.M.T.C. Complex, 3rd Floor, K.H. Road, Shanthinagar,
Bangalore - 560 027. INDIA

No: BMRCL/CE (PM)/Internship/Certificate/2022-23 12th October 2022

TO WHOM-SO-EVER IT MAY CONCERN

****

This is to certify that **Mr. ASHIV CHANDRANKUNNEL SANJEEV (1MV19EE023)** student studying in B.E, 4th Year, (Electrical and Electronics Engineering) of Sir M Visvesvaraya Institute of Technology, Bangalore has completed his Internship Training Programme in Bangalore Metro Rail Corporation Ltd., (BMRCL) from 22.08.2022 to 15.09.2022 under the guidance of Mr. K S Ramachandra, Deputy Chief Engineer (Traction), BMRCL.

We wish him a successful career and bright future ahead.

12/10/2022

(M. Srinivas)
Chief Engineer (PM)

Phone : +91-(0)80-2296 9300 / 22969301, Fax : + 91-(0)80-2296 9222, E-mail : bmrcl@dataone.in Web : www.bmrc.co.in
CIN No. : U16286KA1994GOI016286

ಭಾರತ್ ಎಲೆಕ್ಟ್ರಾನಿಕ್ಸ್
भारत इलेक्ट्रॉनिक्स
BHARAT ELECTRONICS
QUALITY, TECHNOLOGY, INNOVATION

Skill India
कौशल भारत - कुशल भारत

CENTRE FOR LEARNING AND DEVELOPMENT

BHARAT ELECTRONICS LIMITED
(A Govt. of India Enterprise, Ministry of Defence)
Jalahalli Post, Bengaluru - 560 013, India

Certificate

This is to certify that

Sri./Smt/Kum .Balaji. . S. . . . . .
Ref No. 1410/CLD/HR/2022-23/21/229. . . . . .
student of .Sir. M. Visvesvarya. Institute. Of. . . . .
. . . . Technology. . . Bangaloze. . . . . .
carried out Project Work/Internship on .Overview. Of
. . . . Advance. . Defence. . System. . . Navy. . . . . .
. . . . . .
in . .Advance. . . Defence. . System. . . - .Navy. . . . . .
SBU/CSG of BEL, Bengaluru from . . 29. .Aug. .2022. . .
to . . 28. . Sep. .2022. . .

He/She was regular and punctual in his/her attendance and his/her conduct was satisfactory during the period.

Rohan. B. Bhatt
Project / Internship Guide
Date : 28/09/2022
Place : Bengaluru

Head (HR/CLD)
सुजाता [illegible]
प्रबंधक (मा. सं / सी एल डी)
MANAGER (HR/CLD)
भारत इलेक्ट्रानिक्स लिमिटेड
BHARAT ELECTRONICS LTD.
जालहल्ली पोस्ट, बेंगलुरु-560 013
JALAHALLI POST, BANGALORE-560 013

ಭಾರತ್ ಎಲೆಕ್ಟ್ರಾನಿಕ್ಸ್
भारत इलेक्ट्रॉनिक्स
BHARAT ELECTRONICS
QUALITY, TECHNOLOGY, INNOVATION

Skill India
कौशल भारत-कुशल भारत

CENTRE FOR LEARNING AND DEVELOPMENT

BHARAT ELECTRONICS LIMITED
(A Govt. of India Enterprise, Ministry of Defence)
Jalahalli Post, Bengaluru - 560 013, India

Certificate

This is to certify that

Sri./Smt/Kum .... BINDUSHREE. L M .....

Ref No. 1410 / CLD / HR / 2022-23 / 07 / 238 .....

student of ... SIR. M. VISVESVARAYA. INSTITUTE .....

... OF TECHNOLOGY - BANGALORE .....

carried out ~~Project Work~~/Internship on .....

..... OVERVIEW OF MR .....

....

in . MILITARY . RADARS .....

SBU/CSG of BEL, Bengaluru from . 19th Sep. 2022 ....

to . 18th Oct. 2022 ....

~~He~~/She was regular and punctual in ~~his~~/her attendance and ~~his~~/her conduct was satisfactory during the period.

Rohan. B. Bhandari
Project / Internship Guide

Date : 18/10/2022
Place : Bengaluru

Head (HR/CLD)
सुजाता फ्रांसिस
SUJATHA FRANCIS
प्रबंधक (मा. सं / सी एल डी)
MANAGER (HR/CLD)

GULBARGA ELECTRICITY SUPPLY COMPANY LIMITED

(Wholly Owned by Government of Karnataka)

Office : 08472-256782
E-Mail: dcahrd.gescom@gmail.com

Corporate Office, Station Road
Kalaburagi-585102.

No. GESCOM/GM/DCA (HRD)/G-11/1663A/2022-23 S9849 Date: 2 MAR 2023

Certificate

Ref: T.O Approved Letter No. GESCOM/GM/DCA(HRD)/G-11/ 1663A/2022-23/28038-52 Dated 05.09.2022.

** *** **

This is to certify that Miss/Mr. D.K.Shashank (USN- **1MV19EE032***) Electrical and Electronics Engineering student of Sir M Visvesvaraya Institute of Technology Collage of Engineering. has done her/his project report on Electrical and Electronics field works GIS Station and 33/11 KV Sub-Station in GESCOM.*

We certify that the above student has carried out all the necessary work in connection with her/his project report to our satisfaction. Duration from 05.09.2022 to 30.09.2022.

She/he is sincere during the above period and shown interest to gain maximum knowledge with guidance of our staff & content in the report differ from original.

We wish all success in her/his academic excellence.

Deputy Controller of Accounts 02/03/23
(HRD)
GESCOM, Kalaburagi.

JSW Energy Limited

Works :
PB No 9 Toranagallu
Dist Bellary - 583 123 Karnataka India
CIN L74999MH1994PLC077041
Phone 08395 - 282 200
Website www.jsw.in

Ref: JSWEL/HR&Admin
Date: 24-Sept-22

To Whom It May Concern:

This is to certify that **Mr.Dadi Jashwanth Kumar,** bearing HT No:1MV19EE033, sixth semester student of Electrical & Electronics Engineering from **SIR M. Visvesvaraya Institute of Technology,** Bengaluru has successfully completed Two weeks INDUSTRIAL TRAINING from 09- September-2022 to 24-September-2022 at JSW Energy Ltd, Toranagallu.

He took keen interest in the work assigned to him. His conduct and behavior was found good.

We wish him all the success in his future endeavors.

For JSW Energy Ltd,

Vijaykumar Waghmare
Head HR & Admin

Harmonizer
Clarity Everywhere

Certificate of Internship

This is to Certify that

Deepak Kumar, 6th Semester-EEE at sir.MVIT

has attended the Internship program conducted by Harmonizer India Pvt Ltd.,

---

Method to detect, measure, analyze Temperature, Vibration of Electric motor using IIoT and Machine Learning technologies

21st Aug – 20th Sept 2022

M.R.Srinivas - CTO

ಬೆಂಗಳೂರು ಮೆಟ್ರೋ ರೈಲ್ ನಿಗಮ ನಿಯಮಿತ
(ಕರ್ನಾಟಕ ಸರ್ಕಾರ ಹಾಗೂ ಕೇಂದ್ರ ಸರ್ಕಾರ ಸಹಭಾಗಿತ್ವದ ಉದ್ಯಮ)
ನೋಂದಾಯಿತ ಕಚೇರಿ : ಬಿ.ಎಂ.ಟಿ.ಸಿ. ಕಾಂಪ್ಲೆಕ್ಸ್, 3ನೇ ಮಹಡಿ, ಕೆಂಗಲ್ ಹನುಮಂತಯ್ಯ ರಸ್ತೆ, ಶಾಂತಿನಗರ
ಬೆಂಗಳೂರು - 560 027, ಭಾರತ

Bangalore Metro Rail Corporation Ltd.
(A Joint Venture of Government of Karnataka & Government of India)
Regd. Office : B.M.T.C. Complex, 3rd Floor, K.H. Road, Shanthinagar,
Bangalore - 560 027. INDIA

No: BMRCL/CE (PM)/Internship/Certificate/2022-23 12th October 2022

TO WHOM-SO-EVER IT MAY CONCERN

****

This is to certify that **Ms. HARINI P (1MV19EE036)** student studying in B.E, 4th Year, (Electrical and Electronics Engineering) of Sir M Visvesvaraya Institute of Technology, Bangalore has completed her Internship Training Programme in Bangalore Metro Rail Corporation Ltd., (BMRCL) from 22.08.2022 to 15.09.2022 under the guidance of Mr. K S Ramachandra, Deputy Chief Engineer (Traction), BMRCL.

We wish her successful career and bright future ahead.

12/x/2022

(M. Srinivas)
Chief Engineer (PM)

Phone : +91-(0)80-2296 9300 / 22969301, Fax : + 91-(0)80-2296 9222, E-mail : bmrcl@dataone.in Web : www.bmrc.co.in
CIN No. : U16286KA1994GOI016286

Harmonizer
Clarity Everywhere

Certificate of Internship

This is to Certify that

HARSHPRAKASH, *6th Semester-EEE at sir.MVIT*

has attended the Internship program conducted by Harmonizer India Pvt Ltd.,

---

Method to detect, measure, analyze Temperature, Vibration of Electric motor using IIoT and Machine Learning technologies

21st Aug – 20th Sept 2022

M.R.Srinivas - CTO

भारत इलेक्ट्रॉनिक्स लिमिटेड
BHARAT ELECTRONICS

भारत इलेक्ट्रॉनिक्स लिमिटेड
(भारत सरकार का उद्यम, रक्षा मंत्रालय)
उत्पाद विकास एवं नवोन्मेष केंद्र
जालाहल्ली पोस्ट, बेंगलूरु-560 013, भारत
BHARAT ELECTRONICS LIMITED
(A Govt. of India Enterprise, Ministry of Defence)
Product Development & Innovation Centre
Jalahalli Post, Bengaluru-560 013, India.

फोन / Phone :
फैक्स / Fax :
ईमेल / E-mail :

सं/No: 6050/HR/PDIC/PT- 247/2022-23
दिनांक/Date: 20.09.2022

प्रमाण-पत्र - CERTIFICATE

This is to certify that **Mr. Harshit Agnihotri** student of **Sir M Visvesvaraya Institute of Technology**, has undergone Internship in Navigation & Stabilization Division of Product Development & Innovation Centre of BEL from 01.09.2022 to 20.09.2022.

He was regular and punctual and his conduct was satisfactory during period.

HS Raghava

प्रबंधक (मा सं/उ वि न के)
Manager (HR/ PDIC)
20.09.2022

राघवा एच. एस. / RAGHAVA H.S.
स्टाफ़ सं / STAFF No. 212487
प्रबंधक / MANAGER
मा. सं (पीडीआईसी) / HR (PDIC)

9914 041 028 38

ಭಾರತ್ ಎಲೆಕ್ಟ್ರಾನಿಕ್ಸ್
भारत इलेक्ट्रॉनिक्स
BHARAT ELECTRONICS
QUALITY: TECHNOLOGY: INNOVATION

Skill India
कौशल भारत - कुशल भारत

CENTRE FOR LEARNING AND DEVELOPMENT

BHARAT ELECTRONICS LIMITED
(A Govt. of India Enterprise, Ministry of Defence)
Jalahalli Post, Bengaluru - 560 013, India

Certificate

This is to certify that

Sri./Smt/Kum HARSHITHA S REDDY

Ref No. 1410/CLD/HR/2022-23/27/304

student of SIR. M. VISVESVARAYA INSTITUTE OF TECHNOLOGY, BANGALORE

carried out Project Work/Internship on OVERVIEW OF NAVAL SYSTEM [SONAR AND COMMUNICATION SYSTEM]

in NAVAL SYSTEM [SONAR & COMMUNICATION SYSTEM]

SBU/CSG of BEL, Bengaluru from 07th SEP 2022

to 06th OCT 2022

He/She was regular and punctual in his/her attendance and his/her conduct was satisfactory during the period.

Project / Internship Guide

Date : 6/10/22
Place : Bengaluru

Head (HR/CLD)
सुजाता फ्रांसिस / SUJATHA FRANCIS
प्रबंधक (मा. सं / सी एल डी)
MANAGER (HR/CLD)
भारत इलेक्ट्रानिक्स लिमिटेड
BHARAT ELECTRONICS LTD.

Amphenol

Amphenol Omniconnect India Pvt. Ltd.
CIN : U32100TN2008 PTC066155
GSTIN : 33AAGCA7492R1ZY

Date: 28.10.2022

TO WHOMSOEVER IT MAY CONCERN

This is to certify that **ISHA ASTHANA** BE (Electrical & Electronics Engineering), VI sem. Student of **SIR M VISVESVARAYA INSTITUTE OF TECHNOLOGY** has successfully completed her internship training on Manufacturing of Cable assembly & PDU in our Organization during the period of **22.08.2022 to 10.09.2022.** She was found sincere & hard working during this tenure. We wish her all the best for her future endeavors

For Amphenol Omniconnect India Pvt Ltd

Kavitha. K

Senior Manager-HR

AMPHENOL OMNICONNECT INDIA PVT. LTD. ★ TAMILNADU ★
UNIT - 3
Maraimalai Nagar

ಭಾರತ್ ಎಲೆಕ್ಟ್ರಾನಿಕ್ಸ್
भारत इलेक्ट्रॉनिक्स
BHARAT ELECTRONICS
QUALITY TECHNOLOGY INNOVATION

Skill India
कौशल भारत - कुशल भारत

CENTRE FOR LEARNING AND DEVELOPMENT

BHARAT ELECTRONICS LIMITED
(A Govt. of India Enterprise, Ministry of Defence)
Jalahalli Post, Bengaluru - 560 013, India

Certificate

This is to certify that

Sri./Smt/Kum . JAYANTH .....

Ref No. . 1410/CLD/HR/2022-23/27/470 .....

student of . SIR. M. VISVESHVARYA INSTITUTE OF

..... TECHNOLOGY . BANGALORE .....

carried out Project Work/Internship on .....

..... OVERVIEW OF ES .....

.....

in . ENGINEERING SERVICES .....

SBU/CSG of BEL, Bengaluru from . 07-NOV-2022 .

to . 06-DEC-2022 .

He/She was regular and punctual in his/her attendance and his/her conduct was satisfactory during the period.

Project / Internship Guide

Head (HR/CLD)

Date : 9/12/22
Place : Bengaluru

ವಿಮಾನ ಸಂಶೋಧನೆ ಮತ್ತು ವಿನ್ಯಾಸ ಕೇಂದ್ರ (ಎ ಆರ್ ಡಿ ಸಿ)
विमान अनुसंधान एवं अभिकल्प केन्द्र (ए आर डी सी)
AIRCRAFT RESEARCH & DESIGN CENTRE (ARDC)
ವಿನ್ಯಾಸ ಸಂಕೀರ್ಣ / अभिकल्प कॉम्प्लेक्स / DESIGN COMPLEX
ಹಿಂದುಸ್ತಾನ್ ಏರೋನಾಟಿಕ್ಸ್ ಲಿಮಿಟೆಡ್
हिन्दुस्तान एरोनॉटिक्स लिमिटेड
HINDUSTAN AERONAUTICS LIMITED

ಮಾರತ್ತ್ ಹಳ್ಳಿ ಪೋಸ್ಟ್, ಬೆಂಗಳೂರು-560037, ಭಾರತ
मारतहल्ली पोस्ट, बेंगलूरु-560037, भारत
Marathahalli Post, Bengaluru-560037, India
ದೂ / दूरभाष / Ph.: 91-80-22324312, 22316774
ಫ್ಯಾಕ್ಸ್ / फैक्स / Fax: 91-80-22314320

D/ARDC/HR/Proj/Cert/6914/22

28.09.2022

CERTIFICATE

This is to certify that **Ms. M Smriti (USN No. 1MV19EE049)** who is a student of B.E (Electrical & Electronics Engg), Sir M Visvesvaraya Institute of Technology, Bangalore, has undergone **Internship Training** at HAL ARDC, Design Complex, Bengaluru from 01-09-2022 to 28-09-2022 on **"No-Pay-No-Fee-Basis".** She has been punctual, sincere and committed trainee. Her conduct has been found Excellent.

2. The student brings in a lot of energy and enthusiasm in the work, she is structured in her approach and methodical in resolving a problem. She is resourceful and adaptive to working environment.

Human Resources Department Apco

(Ramesh K)
Chief Manager (HR)
ARDC, Design Complex.

ಭಾರತ್ ಎಲೆಕ್ಟ್ರಾನಿಕ್
भारत इलेक्ट्रॉनिक्स
BHARAT ELECTRONICS
QUALITY: TECHNOLOGY: INNOVATION

Skill India
कौशल भारत - कुशल भारत

CENTRE FOR LEARNING AND DEVELOPMENT

BHARAT ELECTRONICS LIMITED
(A Govt. of India Enterprise, Ministry of Defence)
Jalahalli Post, Bengaluru - 560 013, India

Certificate

This is to certify that

Sri./Smt/Kum MAHALAKSHMI

Ref No. 1410/CLD/HR/2022-23/07/239

student of SIR. M. VISVESVARAYA Institute of Technology - Bangalore

carried out ~~Project Work~~/Internship on OVERVIEW OF MR

in MILITARY RADARS

SBU/CSG of BEL, Bengaluru from 19th Sep 2022 *to* 18th Oct 2022

~~He~~/She was regular and punctual in ~~his~~/her attendance and ~~his~~/her conduct was satisfactory during the period.

Project / Internship Guide

Date : 18/10/2022
Place : Bengaluru

Head (HR/CLD)
सुजाता फ्रांसिस
SUJATHA FRANCIS
प्रबंधक (मा. सं / सी एल डी)
MANAGER (HR/CLD)

दूरभाष/Phone : 080-25121123
080-25121108
फैक्स / Fax:080-25235131

सभी पत्राचार मुख्य कार्यपालक (उड़नयोग्यता) को सम्बोधित किया जाए और न किसी अन्य अधिकारी के उपनाम से
All correspondence should be addressed to the Chief Executive (Airworthiness) and not to any officer by name.

CEMILAC

भारत सरकार – रक्षा मंत्रालय
Government of India - Ministry of Defence
रक्षा अनुसंधान एवं विकास संगठन
Defence Research & Development Organisation
सेना उड़नयोग्यता और प्रमाणीकरण केन्द्र (सेमिलाक)
Centre for Military Airworthiness
and Certification (CEMILAC)
मारतहल्ली कालोनी (पोस्ट)
Marathahalli Colony (Post)
बेंगलूरु / Bengaluru - 560 037

संदर्भ सं/ CEMILAC/5942/HRD/Certificates

दिनांक/ Date : 16 Sep 2022

CERTIFICATE

This is to Certify that Ms Manya Jha (USN 1MV19EE053), 6th Semester, B.E, Electrical & Electronics student of Sir M Visvesvaraya Institute of Technology, Bangalore has successfully completed the Internship on "Watchdog Timer - Assurance for Real Time Behaviour" at RCMA (Software) ,CEMILAC, Ministry of Defence, DRDO, Bangalore from 22 Aug 2022 to 10 Sep 2022 under the guidance of Shri Amit Datta, Sc 'E' of RCMA (Software), CEMILAC.

During the period the student has shown keen interest in the subject and the conduct, character and performance of the student is found to be good.

Parashuramak

(परशुरामा के / PARASHURAMA.K), वै. एफ / Sc 'F'
मुख्यस्थ. एचआरडी / Head - HRD
कृते मुख्य कार्यपालक (उड़नयोग्यता) / for Chief Executive (Airworthiness)

ಬೆಂಗಳೂರು ಮೆಟ್ರೋ ರೈಲ್ ನಿಗಮ ನಿಯಮಿತ
(ಕರ್ನಾಟಕ ಸರ್ಕಾರ ಹಾಗೂ ಕೇಂದ್ರ ಸರ್ಕಾರ ಸಹಭಾಗಿತ್ವದ ಉದ್ಯಮ)
ನೋಂದಾಯಿತ ಕಚೇರಿ : ಬಿ.ಎಂ.ಟಿ.ಸಿ. ಕಾಂಪ್ಲೆಕ್ಸ್, 3ನೇ ಮಹಡಿ, ಕೆಂಗಲ್ ಹನುಮಂತಯ್ಯ ರಸ್ತೆ, ಶಾಂತಿನಗರ
ಬೆಂಗಳೂರು – 560 027, ಭಾರತ

Bangalore Metro Rail Corporation Ltd.
(A Joint Venture of Government of Karnataka & Government of India)
Regd. Office : B.M.T.C. Complex, 3rd Floor, K.H. Road, Shanthinagar,
Bangalore - 560 027. INDIA

No: BMRCL/CE (PM)/Internship/Certificate/2022-23 12th October 2022

TO WHOM-SO-EVER IT MAY CONCERN

****

This is to certify that **Ms. MEGHANA V (1MV19EE054)** student studying in B.E, 4th Year, (Electrical and Electronics Engineering) of Sir M Visvesvaraya Institute of Technology, Bangalore has completed her Internship Training Programme in Bangalore Metro Rail Corporation Ltd., (BMRCL) from 22.08.2022 to 15.09.2022 under the guidance of Mr. K S Ramachandra, Deputy Chief Engineer (Traction), BMRCL.

We wish her successful career and bright future ahead.

12/9/2022

(M. Srinivas)
Chief Engineer (PM)

Phone : +91-(0)80-2296 9300 / 22969301, Fax : + 91-(0)80-2296 9222, E-mail : bmrcl@dataone.in Web : www.bmrc.co.in
CIN No. : U16286KA1994GOI016286

BANGALORE ELECTRICITY SUPPLY COMPANY LIMITED
(Wholly owned by Government of karnataka)
Office of the: Executive Engineer(Ele)., C, O&M, Division,Madhugiri -572132
PHONE:08137-282529, e-mail:eemdgdvn.work@gmail.com

Letter No :EE(Ele)/AEE(O)/JPA/22-23/1439 Date: 17 SEP 2022
Encl:

CERTIFICATE

This is to certify that Kumar **Mohd Junaid** bearing USN: 1MV19EE056. student of 6th Semester Bachelor of Engineering in Electrical and Electronics Engineering at Sir M Visvesvaraya Institute of Technology, Bangalore-562157. He has undergone the Internship in the area **"A Study of Transformer Repair Center, L T Rating Sub Division Office"**, during the period from 22.08.2022 to 10.09.2022.

The Internship has been completed successfully to our satisfaction and his conduct during the tenure of the Internship was good and we wish him all the best in his career.

This certificate has been issued with reference to the letter no: VIT/OFF635/1040/2022-23. Dated: 10.08.2022 of Sir M Visvesvaraya Institute of Technology, Bangalore-562157

16/9

Executive Engineer (Ele)
C, O & M Division, BESCOM,
Madhugiri.

ಕರ್ನಾಟಕ ವಿದ್ಯುತ್ ಪ್ರಸರಣ ನಿಗಮ ನಿಯಮಿತ

ನಿಗಮದ ಗುರುತಿನ ಸಂಖ್ಯೆ (ಸಿ.ಐ.ಎನ್): ಯು40109ಕೆಎ1999ಎಸ್‌ಜಿಸಿ025521

ಮಾನವ ಸಂಪನ್ಮೂಲ ಅಭಿವೃದ್ಧಿ ಕೇಂದ್ರ, ಬೈಟ್‌ಫೀಲ್ಡ್ ರಸ್ತೆ, ಹೂಡಿ ಬೆಂಗಳೂರು-560 048

ದೂರವಾಣಿ ಸಂಖ್ಯೆ : 080-28540666

ಅಂತರ್ಜಾಲ: https://kptcl.karnataka.gov.in

ಇ-ಮೇಲ್ ವಿಳಾಸ: kptclsportsor@gmail.com

ಸಂಖ್ಯೆ: ಕವಿಪ್ರನಿನಿ/ಮಾ75/35590/2022-23/ 1253 ದಿನಾಂಕ 23 SEP 2022

ಗೆ,

ಮುಖ್ಯಸ್ಥರು,
ಸರ್ ಎಂ ವಿಶ್ವೇಶ್ವರಯ್ಯ ಇನ್ಸ್ಟಿಟ್ಯೂಟ್ ಆಫ್ ಟೆಕ್ನಾಲಜಿ,
ಬೆಂಗಳೂರು.

ಮಾನ್ಯರೇ,

ವಿಷಯ: ಕವಿಪ್ರನಿನಿಯಲ್ಲಿ ಇಂಟರ್ನ್‌ಶಿಪ್ ತರಬೇತಿಯು ಪೂರ್ಣಗೊಂಡಿರುವ ಬಗ್ಗೆ.

ಉಲ್ಲೇಖ: 1) ಈ ಕಛೇರಿ ಪತ್ರದ ಸಂಖ್ಯೆ: ಕವಿಪ್ರನಿನಿ/ಮಾ.ಸಂ.ಅ.ಕೇಂದ್ರ/ಮಾ75/35590/22-23/892-94 ದಿನಾಂಕ: 26.08.2022
2) ಮಾರ್ಗದರ್ಶಕರ ನೀಡಿರುವ ನಮೂನೆ 'ಎ' ದಿನಾಂಕ 06.09.2022

****

ಮೇಲಿನ ಉಲ್ಲೇಖಿತ ಪತ್ರದನ್ವಯ, ಸರ್ ಎಂ ವಿಶ್ವೇಶ್ವರಯ್ಯ ಇನ್ಸ್ಟಿಟ್ಯೂಟ್ ಆಫ್ ಟೆಕ್ನಾಲಜಿ, ಬೆಂಗಳೂರು. ಇಲ್ಲಿ ಜೆ.ಇ (ಇ & ಇ). ಪದವಿಯಲ್ಲಿ ವ್ಯಾಸಂಗ ಮಾಡುತ್ತಿರುವ, ನವೀನ್ ಎ ಮುರಾಳೆ **USN No: 1MV19EE061** ರವರಿಗೆ **ಶ್ರೀ ರಾಘವೇಂದ್ರ, ಸಹಾಯಕ ಕಾರ್ಯನಿರ್ವಾಹಕ ಇಂಜಿನಿಯರ್(ಓ), 220 ಸ್ಟೀಕರಣ ಕೇಂದ್ರ, ಕವಿಪ್ರನಿನಿ, ರಾಯಚೂರು. ನೆಲಮಂಗಳ ಬೆಂಗಳೂರು.** ರವರ ಮಾರ್ಗದರ್ಶನದಲ್ಲಿ **"Study of Substation"** ಕುರಿತಂತೆ ಇಂಟರ್ನ್‌ಶಿಪ್ ತರಬೇತಿ ಮಾಡಲು ಅನುಮೋದನೆಯನ್ನು ನೀಡಲಾಗಿತ್ತು.

ಉಲ್ಲೇಖ (2) ರ ಧೃಢೀಕರಣದನ್ವಯ, ಮಾರ್ಗದರ್ಶಕರವರು, ವಿದ್ಯಾರ್ಥಿಯು ದಿನಾಂಕ: **29.08.2022** ರಿಂದ **15.09.2022** ರವರೆಗೆ ಇಂಟರ್ನ್‌ಶಿಪ್ ತರಬೇತಿಯನ್ನು ಯಶಸ್ವಿಯಾಗಿ ಪೂರ್ಣಗೊಳಿಸಿರುವುದಾಗಿ ದೃಢೀಕರಿಸಿರುತ್ತಾರೆ. ವಿದ್ಯಾರ್ಥಿಯು ಖುದ್ದಾಗಿ ವರದಿಯ ಒಂದು ಪ್ರತಿಯನ್ನು ತಮ್ಮ ಕಛೇರಿಗೆ ಮುಂದಿನ ಕ್ರಮಕ್ಕಾಗಿ ಸಲ್ಲಿಸುತ್ತಾರೆ.

ತಮ್ಮ ವಿಶ್ವಾಸಿ,
Kaulbl. 23/9/2022
ಆಡಳಿತಾಧಿಕಾರಿ,
ಮಾ.ಸಂ.ಅ.ಕೇಂದ್ರ, ಕವಿಪ್ರನಿನಿ

ಪತ್ರಿಗಳು:

1. ಶ್ರೀ ರಾಘವೇಂದ್ರ, ಸಹಾಯಕ ಕಾರ್ಯನಿರ್ವಾಹಕ ಇಂಜಿನಿಯರ್(ಓ), 220 ಸ್ಟೀಕರಣ ಕೇಂದ್ರ, ಕವಿಪ್ರನಿನಿ, ರಾಯಚೂರು. ನೆಲಮಂಗಳ ಬೆಂಗಳೂರು.
2. ಮುಖ್ಯಸ್ಥರು, ಸರ್ ಎಂ ವಿಶ್ವೇಶ್ವರಯ್ಯ ಇನ್ಸ್ಟಿಟ್ಯೂಟ್ ಆಫ್ ಟೆಕ್ನಾಲಜಿ, ಬೆಂಗಳೂರು.
3. ಸಂಬಂಧಪಟ್ಟ ವಿದ್ಯಾರ್ಥಿ/ ಸ.ಕಾ.ನಿ.ಇಂ(ವಿ)-2/ ಕ.ಪ್ರ./ ಮು.ಕ.

Harmonizer
Clarity Everywhere

Certificate of Internship

This is to Certify that

NILESH SAHAY, *6th Semester-EEE at sir.MVIT*

has attended the Internship program conducted by Harmonizer India Pvt Ltd.,

---

Method to detect, measure, analyze Temperature, Vibration of Electric motor using IIoT and Machine Learning technologies

21st Aug – 20th Sept 2022

M.R.Srinivas - CTO

ಭಾರತ್ ಎಲೆಕ್ಟ್ರಾನಿಕ್
भारत इलेक्ट्रॉनिक्स
BHARAT ELECTRONICS
QUALITY. TECHNOLOGY. INNOVATION

Skill India
कौशल भारत - कुशल भारत

CENTRE FOR LEARNING AND DEVELOPMENT

BHARAT ELECTRONICS LIMITED
(A Govt. of India Enterprise, Ministry of Defence)
Jalahalli Post, Bengaluru - 560 013, India

Certificate

This is to certify that

Sri./Smt/Kum NIVEDITHA B.S

Ref No. 1410/CLD/HR/2022-23/27/305

student of SIR. M VISVESVARAYA INSTITUTE OF TECHNOLOGY, BANALORE

carried out Project Work/Internship on OVERVIEW OF NAVAL SYSTEM [SONAR AND COMMUNICATION SYSTEM]

in NAVAL SYSTEM [SONAR & COMMUNICATION SYSTEM]

SBU/CSG of BEL, Bengaluru from 07th SEP 2022

to 06th OCT 2022

He/She was regular and punctual in his/her attendance and his/her conduct was satisfactory during the period.

Project / Internship Guide

Date : 6/10/2022
Place : Bengaluru

Head (HR/CLD)
सुजाता फ्रांसिस / SUJATHA FRANCIS
प्रबंधक (मा. सं / सी एल डी)
MANAGER (HR/CLD)
भारत इलेक्ट्रानिक्स लिमिटेड
BHARAT ELECTRONICS LTD.
जालहल्ली पोस्ट, बेंगलूरु-560 013
JALAHALLI POST, BANGALORE-560 013

GULBARGA ELECTRICITY SUPPLY COMPANY LIMITED
(Wholly Owned by Government of Karnataka)

Office : 08472-256782
E-Mail: deahrd.gescom@gmail.com

Corporate Office, Station Road
Kalaburagi-585102.

No. GESCOM/GM/DCA (HRD)/G-11/1663A/2022-23 54821 Date: 4 FEB 2023

Certificate

Ref: T.O Approved Letter No. GESCOM/GM/DCA(HRD)/G-11/ 1663A/2022-23/28038-52 Dated 05.09.2022.

** *** **

This is to certify that Miss/Mr. Pankaj A Chavan (USN- **1MV19EE065***) Electrical and Electronics Engineering student of Sir M Visvesvaraya Institute of Technology Collage of Engineering. has done her/his project report on Electrical and Electronics field works GIS Station and 33/11 KV Sub-Station in GESCOM.*

We certify that the above student has carried out all the necessary work in connection with her/his project report to our satisfaction. Duration from 05.09.2022 to 30.09.2022.

She/he is sincere during the above period and shown interest to gain maximum knowledge with guidance of our staff & content in the report differ from original.

We wish all success in her/his academic excellence.

Deputy Controller of Accounts
(HRD)
GESCOM, Kalaburagi.

ಕರ್ನಾಟಕ ವಿದ್ಯುತ್ ಪ್ರಸರಣ ನಿಗಮ ನಿಯಮಿತ

ನಿಗಮದ ಗುರುತಿನ ಸಂಖ್ಯೆ (ಸಿ.ಐ.ಎನ್): U40109KA1999SGC025521

ಮಾನವ ಸಂಪನ್ಮೂಲ ಅಭಿವೃದ್ಧಿ ಕೇಂದ್ರ, ಬೈಯಪ್ಪನಹಳ್ಳಿ ರಸ್ತೆ, ಹೂಡಿ ಬೆಂಗಳೂರು-560 048

ದೂರವಾಣಿ ಸಂಖ್ಯೆ : 080-22540666

ಅಂತರ್ಜಾಲ: https://kptcl.karnataka.gov.in

ಇ-ಮೇಲ್ ವಿಳಾಸ: kptclsportsor@gmail.com

ಕಾಪ್ಯ: ಕವಿಪ್ರನಿನಿ/ಮಾಸಂ/ತರಬೇತಿ/2022-23/ 975

ದಿನಾಂಕ :

22 AUG 2022

ಅಧಿಕೃತ ವ್ಯಾಪ್ತಿಪತ್ರ

ವಿಷಯ: **"Study on Substation Equipments "** ವಿಷಯದ ಕುರಿತಂತೆ ಕ.ವಿ.ಪ್ರ.ನಿ.ನಿ ಯಲ್ಲಿ ತರಬೇತಿಯನ್ನು ಮಾಡಲು ಅನುಮೋದನೆಯನ್ನು ನೀಡುವ ಬಗ್ಗೆ.

ಉಲ್ಲೇಖ: ಶ್ರೀ ಎಂ ವಿಶ್ವೇಶ್ವರಯ್ಯ ಇನ್ಸ್ಟಿಟ್ಯೂಟ್ ಆಫ್ ಟೆಕ್ನಾಲಜಿ, ಬೆಂಗಳೂರು, ರವರ ಪತ್ರ ದಿನಾಂಕ: 10.08.2021

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ಶ್ರೀ ಎಂ ವಿಶ್ವೇಶ್ವರಯ್ಯ ಇನ್ಸ್ಟಿಟ್ಯೂಟ್ ಆಫ್ ಟೆಕ್ನಾಲಜಿ, ಬೆಂಗಳೂರು, ಇಲ್ಲಿ ಬಿ. ಇ (ಇ & ಇ) ಪದವಿಯಲ್ಲಿ ವ್ಯಾಸಂಗ ಮಾಡುತ್ತಿರುವ, ಈ ಕೆಳಕಂಡ ವಿದ್ಯಾರ್ಥಿಯು, **ಶ್ರೀ ಡಿ ಎಂ ಪಣ್ಣುಪಪ್ಪ, ಸಹಾಯಕ ಕಾರ್ಯನಿರ್ವಾಹಕ ಇಂಜಿನಿಯರ್(ವಿ), 220 ಕೆ.ವಿ ವಿದ್ಯುತ್ ಕೇಂದ್ರ, ಕವಿಪ್ರನಿನಿ, ಪಿರಿಯಾಪಟ್ಟಣ,** ರವರ ಮಾರ್ಗದರ್ಶನದಲ್ಲಿ **"Study on Substation Equipments"** ಎಂಬ ವಿಷಯದ ಕುರಿತಂತೆ, ದಿನಾಂಕ: **23.08.2022** ರಿಂದ **14.09.2022** ರವರೆಗೆ ತರಬೇತಿಯನ್ನು ಪಡೆಯಲು ಈ ಕೆಳಗಿನ ಷರತ್ತುಗಳಿಗೆ ಒಳಪಟ್ಟಂತೆ ಅನುಮೋದನೆಯನ್ನು ನೀಡಲಾಗಿದೆ.

- ಸದರಿ ತರಬೇತಿಯು ಯಾವುದೇ ರೀತಿಯಲ್ಲೂ ಕವಿಪ್ರನಿನಿಯ ನಿಯಮಿತ ಕರ್ತವ್ಯಗಳನ್ನು ಅಡ್ಡಿಪಡಿಸಬಾರದು.

- ತರಬೇತಿ ಗಳಿಸಿದ ವಿದ್ಯಾರ್ಥಿಯು, ತರಬೇತಿಯು ಮುಗಿದ ನಂತರ ಅದರ ಮುಕ್ತಾಯ ವರದಿಯನ್ನು ಕಾಲೇಜಿನ ಆಂತರಿಕ ಮಾರ್ಗದರ್ಶಕರ ಸಹಿ, ಕವಿಪ್ರನಿನಿಯ ಮಾರ್ಗದರ್ಶಕರ ಸಹಿ ಮತ್ತು ವಿದ್ಯಾರ್ಥಿಯ ಸಹಿಯನ್ನು ಒಳಗೊಂಡಿರತಕ್ಕದ್ದು ಮತ್ತು ಕವಿಪ್ರನಿನಿಯ ನಿಗದಿತ 'ಎ' ನಮೂನೆಯಲ್ಲಿ ಕವಿಪ್ರನಿನಿಯ ಮಾರ್ಗದರ್ಶಕರು ಸಹಿ ಮಾಡಿದ ತರಬೇತಿಯ ಪರಿಶೀಲನಾ ಮತ್ತು ಪೂರ್ಣಗೊಂಡ ದೃಢೀಕರಣ ಪತ್ರವನ್ನು ಹಾಗೂ ವಿದ್ಯಾರ್ಥಿಯರ ಹಾಜರಾತಿ ಪ್ರತಿಯನ್ನು ಲಗತ್ತಿಸಿ, ಈ ಕಛೇರಿಗೆ ಸಲ್ಲಿಸಿದ ನಂತರ, ಸಂಬಂಧಪಟ್ಟ ಕಾಲೇಜಿಗೆ ವಿದ್ಯಾರ್ಥಿಯ ತರಬೇತಿಯ ಪೂರ್ಣಗೊಂಡ ಬಗ್ಗೆ, ಈ ಕಛೇರಿಯಿಂದ ಪ್ರಮಾಣ ಪತ್ರವನ್ನು ನೀಡಲಾಗುವುದು.

ಕ್ರಮ ಸಂ	ವಿದ್ಯಾರ್ಥಿಯ ಹೆಸರು	ಯು.ಎಸ್.ಎನ್/ನೋಂದಣಿ ಸಂಖ್ಯೆ
1	ಪ್ರಮೋದ್ ಎಂ	1MV19EE066

22/8/2022

ಸಿ ಆಡಳಿತಾಧಿಕಾರಿ

ಮಾನವ ಸಂಪನ್ಮೂಲ ಅಭಿವೃದ್ಧಿ ಕೇಂದ್ರ,

ಕ.ವಿ.ಪ್ರ.ನಿ.ನಿ, ಹೂಡಿ, ಬೆಂಗಳೂರು.

ಭಾರತ್ ಎಲೆಕ್ಟ್ರಾನಿಕ್
भारत इलेक्ट्रॉनिक्स
BHARAT ELECTRONICS
QUALITY, TECHNOLOGY, INNOVATION

Skill India
कौशल भारत-कुशल भारत

CENTRE FOR LEARNING AND DEVELOPMENT

BHARAT ELECTRONICS LIMITED
(A Govt. of India Enterprise, Ministry of Defence)
Jalahalli Post, Bengaluru - 560 013, India

Certificate

This is to certify that

Sri./Smt/Kum ..... PRASHANTH NOOLVI .....

Ref No. 1410/CLD/HR/2022-23/27/487 .....

student of ..SIR. M. Visvesvaraya. Institute. of.....

..... Technology. - Bangalore .....

carried out ~~*Project Work/*~~*Internship on* .....

..... OVERVIEW. OF. SC & US .....

.....

in .Strategic. Communication. & unmanned. System..

SBU/CSG of BEL, Bengaluru from .15th. Sep. 2022.....

to .14th. Oct. 2022...

He/~~She~~ was regular and punctual in his/~~her~~ attendance and his/her conduct was satisfactory during the period.

Project / Internship Guide

Head (HR/CLD)

Date : 17/10/2022
Place : Bengaluru

Harmonizer
Clarity Everywhere

Certificate of Internship

This is to Certify that

PRATYUSH RAJ PANDEY, *6th Semester-EEE at sir.MVIT*

has attended the Internship program conducted by Harmonizer India Pvt Ltd.,

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Method to detect, measure, analyze Temperature, Vibration of Electric motor using IIoT and Machine Learning technologies

21st Aug – 20th Sept 2022

M.R.Srinivas - *CTO*

kailash
Transformers Pvt. Ltd.
Office : P. B. # 124 - Nehru Gunj
KALABURAGI - 585 104 - Karnataka
☎ : (08472) 257449 Fax : 257549
•
Works : # 23 - KIADB - Ist Stage
Kapnoor Industrial Area
KALABURAGI - 585 104 - Karnataka
Phone & Fax : 08472 - 258349
GSTIN : 29AAACK7792G1Z3
E-mail : kailashpvtltd1@gmail.com
•
CIN : U03210KA1996PTC020982

KTPL/2022-23/ Date:10.09.2022

TO WHOMSOEVER IT MAY CONCERN

This is to certify that Mr.Praveen Kumar USN.No.1MV19EE070 Student of Sir M.Visvesvaraya Institute of Technology Bangalore has successfully completed a Internship from the date of 21.08.2022 to 10.09.2022.

During the period of his internship program with us, he had been exposed to different processes and was found diligent, hardworking and inquisitive.

We wish him every success in his life and career.

For: Authorisesd Signature
For: Kailash Transformers Pvt.Lt.d,

kallash
Transformers Pvt. Ltd.
Office : P. B. # 124 - Nehru Gunj
KALABURAGI - 585 104 - Karnataka
☎ : (08472) 257449 Fax : 257549
Works : # 23 - KIADB - 1st Stage
Kapnoor Industrial Area
KALABURAGI - 585 104 - Karnataka
Phone & Fax : 08472 - 258349
GSTIN : 29AAACK7792G1Z3
E-mail : kailashpvtltd1@gmail.com
CIN : U03210KA1996PTC020982

KTPL/2022-23/ Date:10.09.2022

TO WHOMSOEVER IT MAY CONCERN

This is to certify that Mr.Pruthviraj B.Goudar USN.No.1MV19EE071 Student of Sir M.Visvesvaraya Institute of Technology Bangalore has successfully completed a Internship from the date of 21.08.2022 to 10.09.2022.

During the period of his internship program with us, he had been exposed to different processes and was found diligent, hardworking and inquisitive.

We wish him every success in his life and career.

For: Authorisesd Signature
For: Kailash Transformers Pvt.Ltd,

Harmonizer
Clarity Everywhere

Certificate of Internship

This is to Certify that

RAHMATH ALI B, *6th Semester-EEE at sir.MVIT*

has attended the Internship program conducted by Harmonizer India Pvt Ltd.,

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Method to detect, measure, analyze Temperature, Vibration of Electric motor using IIoT and Machine Learning technologies

21st Aug – 20th Sept 2022

M.R.Srinivas - CTO

भारत इलेक्ट्रॉनिक्स
BHARAT ELECTRONICS
QUALITY, TECHNOLOGY, INNOVATION

Skill India
कौशल भारत - कुशल भारत

CENTRE FOR LEARNING AND DEVELOPMENT

BHARAT ELECTRONICS LIMITED
(A Govt. of India Enterprise, Ministry of Defence)
Jalahalli Post, Bengaluru - 560 013, India

Certificate

This is to certify that

Sri./Smt/Kum RAHUL. N

Ref No. 1410/CLD/HR/2022-23/27/215/216

student of SIR. M. VISVESVARAYA. INSTITUTE. OF. TECHNOLOGY. BANGALORE

carried out Project Work/Internship on OVERVIEW OF MISSILE SYSTEM

in MISSILE SYSTEM

SBU/CSG of BEL, Bengaluru from 24/08/2022

to 23/09/2022

He/She was regular and punctual in his/her attendance and his/her conduct was satisfactory during the period.

Rohan. D. Dsouza
Project / Internship Guide

Date : 23-09-2022
Place : Bengaluru

Head (HR/CLD)

SUJATHA FRANCIS
MANAGER (HR/CLD)
BHARAT ELECTRONICS LTD.

ಕರ್ನಾಟಕ ವಿದ್ಯುತ್ ಪ್ರಸರಣ ನಿಗಮ ನಿಯಮಿತ

ನಿಗಮದ ಗುರುತಿನ ಸಂಖ್ಯೆ (ಸಿ.ಐ.ಎನ್): U40109KA1999SGC025521

ಮಾನವ ಸಂಪನ್ಮೂಲ ಅಭಿವೃದ್ಧಿ ಕೇಂದ್ರ, ಪೈಟೋಫೀಲ್ಡ್ ರಸ್ತೆ, ಹೂಡಿ ಬೆಂಗಳೂರು-560 048

ದೂರವಾಣಿ ಸಂಖ್ಯೆ : 080-28540666

ಅಂತರ್ಜಾಲ: https://kptcl.karnataka.gov.in

ಇ-ಮೇಲ್ ವಿಳಾಸ: kptclsportsor@gmail.com

ಸಂಖ್ಯೆ: ಕವಿಪ್ರನಿನಿ/ಬಿ75/35590/2022-23/ 1255 ದಿನಾಂಕ 23 SEP 2022

ಗೆ,

ಮುಖ್ಯಸ್ಥರು,
ಸರ್ ಎಂ ವಿಶ್ವೇಶ್ವರಯ್ಯ ಇನ್ಸ್ಟಿಟ್ಯೂಟ್ ಆಫ್ ಟೆಕ್ನಾಲಜಿ,
ಬೆಂಗಳೂರು.

ಮಾನ್ಯರೇ,

ವಿಷಯ: ಕವಿಪ್ರನಿನಿಯಲ್ಲಿ ಇಂಟರ್ನ್‌ಶಿಪ್ ತರಬೇತಿಯು ಪೂರ್ಣಗೊಂಡಿರುವ ಬಗ್ಗೆ.

ಉಲ್ಲೇಖ: 1) ಈ ಕಛೇರಿ ಪತ್ರದ ಸಂಖ್ಯೆ: ಕವಿಪ್ರನಿನಿ/ಮಾ.ಸಂ.ಅ.ಕೇಂದ್ರ/ಬಿ75/35590/22-23/742-44 ದಿನಾಂಕ: 16.08.2022
2) ಮಾರ್ಗದರ್ಶಕರ ನೀಡಿರುವ ನಮೂನೆ 'ಎ' ದಿನಾಂಕ 17.09.2022

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ಮೇಲಿನ ಉಲ್ಲೇಖದ ಪತ್ರದನ್ವಯ, ಸರ್ ಎಂ ವಿಶ್ವೇಶ್ವರಯ್ಯ ಇನ್ಸ್ಟಿಟ್ಯೂಟ್ ಆಫ್ ಟೆಕ್ನಾಲಜಿ, ಬೆಂಗಳೂರು, ಇಲ್ಲಿ ಬಿ.ಇ (ಇ & ಇ), ಪದವಿಯಲ್ಲಿ ವ್ಯಾಸಂಗ ಮಾಡುತ್ತಿರುವ, ರಾಹುಲ್ ಎನ್ ಎಂ **USN No: 1MV19EE074** ರವರಿಗೆ ಶ್ರೀಮತಿ ಸುಜಾತ, ಸಹಾಯಕ ಕಾರ್ಯನಿರ್ವಾಹಕ ಇಂಜಿನಿಯರ್(ವಿ), ನೋಡಲ್ ಉಪ ಕೇಂದ್ರ, ಕವಿಪ್ರನಿನಿ, ತರೀಕೆರೆ, ರವರ ಮಾರ್ಗದರ್ಶನದಲ್ಲಿ **"Study on Substation Equipments"** ಕುರಿತಂತೆ ಇಂಟರ್ನ್‌ಶಿಪ್ ತರಬೇತಿ ಮಾಡಲು ಅನುಮೋದನೆಯನ್ನು ನೀಡಲಾಗಿತ್ತು.

ಉಲ್ಲೇಖ (2) ರ ದೃಢೀಕರಣದನ್ವಯ, ಮಾರ್ಗದರ್ಶಕರವರು, ವಿದ್ಯಾರ್ಥಿಯು ದಿನಾಂಕ: **21.08.2022** ರಿಂದ **17.09.2022** ರವರೆಗೆ ಇಂಟರ್ನ್‌ಶಿಪ್ ತರಬೇತಿಯನ್ನು ಯಶಸ್ವಿಯಾಗಿ ಪೂರ್ಣಗೊಳಿಸಿರುವುದಾಗಿ ದೃಢೀಕರಿಸಿರುತ್ತಾರೆ. ವಿದ್ಯಾರ್ಥಿಯು ಮಿದ್ದಾಗಿ ವರದಿಯ ಒಂದು ಪ್ರತಿಯನ್ನು ತಮ್ಮ ಕಛೇರಿಗೆ ಮುಂದಿನ ಕ್ರಮಕ್ಕಾಗಿ ಸಲ್ಲಿಸುತ್ತಾರೆ.

ತಮ್ಮ ವಿಶ್ವಾಸಿ,

23/9/2022

ಸಿ ಆಡಳಿತಾಧಿಕಾರಿ,
ಮಾ.ಸಂ.ಅ.ಕೇಂದ್ರ, ಕವಿಪ್ರನಿನಿ

ಪತ್ರಿಗಳು:

1. ಶ್ರೀಮತಿ ಸುಜಾತ, ಸಹಾಯಕ ಕಾರ್ಯನಿರ್ವಾಹಕ ಇಂಜಿನಿಯರ್(ವಿ), ನೋಡಲ್ ಉಪ ಕೇಂದ್ರ, ಕವಿಪ್ರನಿನಿ, ತರೀಕೆರೆ
2. ಮುಖ್ಯಸ್ಥರು, ಸರ್ ಎಂ ವಿಶ್ವೇಶ್ವರಯ್ಯ ಇನ್ಸ್ಟಿಟ್ಯೂಟ್ ಆಫ್ ಟೆಕ್ನಾಲಜಿ, ಬೆಂಗಳೂರು.
3. ಸಂಬಂಧಪಟ್ಟ ವಿದ್ಯಾರ್ಥಿ/ ಸ.ಕಾ.ನಿ.ಇಂ(ವಿ)-2/ ಕ.ಪ್ರ./ ಮು.ಕ.

Certificate of Internship

This is to Certify that

Reet Gupta, 6th Semester-EEE at sir.MVIT

has attended the Internship program conducted by Harmonizer India Pvt Ltd.,

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Method to detect, measure, analyze Temperature, Vibration of Electric motor using IIoT and Machine Learning technologies

21st Aug – 20th Sept 2022

M.R.Srinivas - CTO

ಕರ್ನಾಟಕ ವಿದ್ಯುತ್ ಪ್ರಸರಣ ನಿಗಮ ನಿಯಮಿತ

ನಿಗಮದ ಗುರುತಿನ ಸಂಖ್ಯೆ (ಸಿ.ಐ.ಎನ್): ಯು40109ಕೆಎ1999ಎಸ್‌ಜಿಸಿ025521

ಮಾನವ ಸಂಪನ್ಮೂಲ ಅಭಿವೃದ್ಧಿ ಕೇಂದ್ರ, ವೈಟ್‌ಫೀಲ್ಡ್ ರಸ್ತೆ, ಹೂಡಿ ಬೆಂಗಳೂರು-560 048

ದೂರವಾಣಿ ಸಂಖ್ಯೆ : 080-28540666

ಅಂತರ್ಜಾಲ: https://kptcl.karnataka.gov.in

ಇ-ಮೇಲ್ ವಿಳಾಸ: kptclsportsor@gmail.com

ಸಂಖ್ಯೆ: ಕವಿಪ್ರನಿನಿ/ಬಿ75/35590/2022-23/ 1264 ದಿನಾಂಕ 28 SEP 2022

ಗೆ,

ಮುಖ್ಯಸ್ಥರು,
ಸರ್ ಎಂ ವಿಶ್ವೇಶ್ವರಯ್ಯ ಇನ್ಸ್ಟಿಟ್ಯೂಟ್ ಆಫ್ ಟೆಕ್ನಾಲಜಿ,
ಬೆಂಗಳೂರು.

ಮಾನ್ಯರೇ,

ವಿಷಯ: ಕವಿಪ್ರನಿನಿಯಲ್ಲಿ ಇಂಟರ್ನ್‌ಶಿಪ್ ತರಬೇತಿಯು ಪೂರ್ಣಗೊಂಡಿರುವ ಬಗ್ಗೆ.

ಉಲ್ಲೇಖ: 1) ಈ ಕಛೇರಿ ಪತ್ರದ ಸಂಖ್ಯೆ: ಕವಿಪ್ರನಿನಿ/ಮಾ.ಸಂ.ಅ.ಕೇಂದ್ರ/ಬಿ75/35590/22-23/769-71 ದಿನಾಂಕ: 22.08.2022
2) ಮಾರ್ಗದರ್ಶಕರ ನೀಡಿರುವ ನಮೂನೆ 'ಎ' ದಿನಾಂಕ 12.09.2022

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ಮೇಲಿನ ಉಲ್ಲೇಖದ ಪತ್ರದನ್ವಯ, ಸರ್ ಎಂ ವಿಶ್ವೇಶ್ವರಯ್ಯ ಇನ್ಸ್ಟಿಟ್ಯೂಟ್ ಆಫ್ ಟೆಕ್ನಾಲಜಿ, ಬೆಂಗಳೂರು, ಇಲ್ಲಿ ಬಿ.ಇ (ಇ & ಇ). ಪದವಿಯಲ್ಲಿ ವ್ಯಾಸಂಗ ಮಾಡುತ್ತಿರುವ, ರೋಹನ್ ಯೋಗೇಶ್ ಗೌಡರ್ **USN No: 1MV19EE078** ರವರಿಗೆ ಶ್ರೀ ವೀರೇಂದ್ರ ರಾಮಯ್ಯ ಗೊಂಡ, ಪ್ರಭಾರ ಸಹಾಯಕ ಕಾರ್ಯನಿರ್ವಾಹಕ ಇಂಜಿನಿಯರ್(ವಿ), ನೋಡಲ್ ಕೇಂದ್ರ, ಕವಿಪ್ರನಿನಿ, ಸಾಗರ. ರವರ ಮಾರ್ಗದರ್ಶನದಲ್ಲಿ **"Study of Substation"** ಕುರಿತಂತೆ ಇಂಟರ್ನ್‌ಶಿಪ್ ತರಬೇತಿ ಮಾಡಲು ಅನುಮೋದನೆಯನ್ನು ನೀಡಲಾಗಿತ್ತು.

ಉಲ್ಲೇಖ (2) ರ ಧೃಢೀಕರಣದನ್ವಯ, ಮಾರ್ಗದರ್ಶಕರವರು, ವಿದ್ಯಾರ್ಥಿಯು ದಿನಾಂಕ: 22.08.2022 ರಿಂದ **12.09.2022** ರವರೆಗೆ ಇಂಟರ್ನ್‌ಶಿಪ್ ತರಬೇತಿಯನ್ನು ಯಶಸ್ವಿಯಾಗಿ ಪೂರ್ಣಗೊಳಿಸಿರುವುದಾಗಿ ಧೃಢೀಕರಿಸಿರುತ್ತಾರೆ. ವಿದ್ಯಾರ್ಥಿಯು ಮುದ್ರಾಂಕ ವರದಿಯ ಒಂದು ಪ್ರತಿಯನ್ನು ತಮ್ಮ ಕಛೇರಿಗೆ ಮುಂದಿನ ಕ್ರಮಕ್ಕಾಗಿ ಸಲ್ಲಿಸುತ್ತಾರೆ.

ತಮ್ಮ ವಿಶ್ವಾಸಿ,

Kavi 28/9/2022

ಪಿ.ಸಿ ಆದಳಿತಾಧಿಕಾರಿ,
ಮಾ.ಸಂ.ಅ.ಕೇಂದ್ರ, ಕವಿಪ್ರನಿನಿ

ಪತ್ರಿಗಳು:

1. **ಶ್ರೀ ವೀರೇಂದ್ರ ರಾಮಯ್ಯ ಗೊಂಡ, ಪ್ರಭಾರ ಸಹಾಯಕ ಕಾರ್ಯನಿರ್ವಾಹಕ ಇಂಜಿನಿಯರ್(ವಿ), ನೋಡಲ್ ಕೇಂದ್ರ, ಕವಿಪ್ರನಿನಿ, ಸಾಗರ. ನೆಲದುಂಗಳ ಬೆಂಗಳೂರು.**
2. ಮುಖ್ಯಸ್ಥರು, ಸರ್ ಎಂ ವಿಶ್ವೇಶ್ವರಯ್ಯ ಇನ್ಸ್ಟಿಟ್ಯೂಟ್ ಆಫ್ ಟೆಕ್ನಾಲಜಿ, ಬೆಂಗಳೂರು.
3. ಸಂಬಂಧಪಟ್ಟ ವಿದ್ಯಾರ್ಥಿ/ ಸ.ಕಾ.ನಿ.ಇಂ(ವಿ)-2/ ಕ.ಪ್ರ./ ಮು.ಕ.

भारत इलेक्ट्रॉनिक्स लिमिटेड
(भारत सरकार का उद्यम, रक्षा मंत्रालय)
उत्पाद विकास एवं नवोन्मेष केंद्र
जालहल्ली पोस्ट, बेंगलूरु–560 013, भारत
BHARAT ELECTRONICS LIMITED
(A Govt. of India Enterprise, Ministry of Defence)
Product Development & Innovation Centre
Jalahalli Post, Bengaluru-560 013, India.
फोन / Phone :
फैक्स / Fax :
ईमेल / E-mail :

सं/No: 6050/HR/PDIC/PT- 254/2022-23
दिनांक/Date: 20.09.2022

प्रमाण-पत्र - CERTIFICATE

This is to certify that **Mr. Rohith C H** student of **Sir M Visvesvaraya Institute of Technology**, has undergone Internship in Navigation & Stabilization Division of Product Development & Innovation Centre of BEL from 01.09.2022 to 20.09.2022.

He was regular and punctual and his conduct was satisfactory during period.

HS Raghava
प्रबंधक (मा सं /वि न के)
Manager (HR/ PDIC)
20.09.2022

राघवा एच. एस. / RAGHAVA H.S.
स्टाफ़ सं / STAFF No. 212487
प्रबंधक / MANAGER
मा. सं (पीडीआईसी) / HR (PDIC)

Harmonizer
Clarity Everywhere

Certificate of Internship

This is to Certify that
Saiymeen Fatima,
6th Semester-EEE at sir.MVIT
has attended the Internship program conducted by Harmonizer India Pvt Ltd.

Method to detect, measure, analyze Temperature, Vibration of Electric motor using IIoT and Machine Learning technologies

21st Aug – 20th Sept 2022

M.R.Srinivas - CTO

kailash
Transformers Pvt. Ltd.
Office : P. B. # 124 - Nehru Gunj
KALABURAGI - 585 104 - Karnataka
☎ : (08472) 257449 Fax : 257549
•
Works : # 23 - KIADB - Ist Stage
Kapnoor Industrial Area
KALABURAGI - 585 104 - Karnataka
Phone & Fax : 08472 - 258349
GSTIN : 29AAACK7792G1Z3
E-mail : kailashpvtltd1@gmail.com
•
CIN : U03210KA1996PTC020982

KTPL/2022-23/

Date:10.09.2022

TO WHOMSOEVER IT MAY CONCERN

This is to certify that Mr.Sangamesh. Juntpally USN.No.1MV19EE083 Student of Sir M.Visvesvaraya Institute of Technology Bangalore has successfully completed a Internship from the date of 21.08.2022 to 10.09.2022.

During the period of his internship program with us, he had been exposed to different processes and was found diligent, hardworking and inquisitive.

We wish him every success in his life and career.

For: Authorisesd Signature
For: Kailash Transformers Pvt.Lt.d,

ಭಾರತ್ ಎಲೆಕ್ಟ್ರಾನಿಕ್ಸ್
भारत इलेक्ट्रॉनिक्स
BHARAT ELECTRONICS
QUALITY, TECHNOLOGY AND INNOVATION

Skill India
कौशल भारत - कुशल भारत

CENTRE FOR LEARNING AND DEVELOPMENT

BHARAT ELECTRONICS LIMITED
(A Govt. of India Enterprise, Ministry of Defence)
Jalahalli Post, Bengaluru - 560 013, India

Certificate

This is to certify that

Sri./Smt/Kum ..... SATHISH. G. K .....

Ref No. IHIO/CLD/HR/2022-23/07/488 .....

student of .. SIR. M. Visvesvaraya Institute of ....

..... Technology - Bangalore .....

carried out ~~Project Work~~/Internship on .....

..... OVERVIEW OF SOS .....

.....

in Strategic Communication & Unmanned System ..

SBU/CSG of BEL, Bengaluru from .. 15th Sep 2022 .....

to .14th .. Oct 2022 ...

He/~~She~~ was regular and punctual in his/~~her~~ attendance and his/~~her~~ conduct was satisfactory during the period.

Project / Internship Guide **Head (HR/CLD)**

Date : 17/10/2022
Place : Bengaluru

ಭಾರತ್ ಎಲೆಕ್ಟ್ರಾನಿಕ್ಸ್
भारत इलेक्ट्रॉनिक्स
BHARAT ELECTRONICS
QUALITY. TECHNOLOGY. INNOVATION

Skill India
कौशल भारत-कुशल भारत

CENTRE FOR LEARNING AND DEVELOPMENT

BHARAT ELECTRONICS LIMITED
(A Govt. of India Enterprise, Ministry of Defence)
Jalahalli Post, Bengaluru - 560 013, India

Certificate

This is to certify that

Sri./Smt/Kum SINDHU . T

Ref No. 1410/CLD/HR./2022-23/27./224

student of SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGY BANGALORE

carried out Project Work/Internship on OVERVIEW OF NAVAL SYSTEM [SONAR AND COMMUNICATION SYSTEM]

in NAVAL SYSTEM [SONAR AND COMMUNICATION SYSTEM]

SBU/CSG of BEL, Bengaluru from 24 AUG 2022

to 23 SEP. 2022

He/She was regular and punctual in his/her attendance and his/her conduct was satisfactory during the period.

Project / Internship Guide

Date : 23-09-2022
Place : Bengaluru

Head (HR/CLD)
MANAGER (HR/CLD)
BHARAT ELECTRONICS LTD.
JALAHALLI POST, BANGALORE-560 013

Harmonizer
Clarity Everywhere

Certificate of Internship

This is to Certify that

SONAL KUMAR, *6th Semester-EEE at sir.MVIT*

has attended the Internship program conducted by Harmonizer India Pvt Ltd.,

---

Method to detect, measure, analyze Temperature, Vibration of Electric motor using IIoT and Machine Learning technologies

21st Aug – 20th Sept 2022

M.R.Srinivas - CTO

Harmonizer
Clarity Everywhere

Certificate of Internship

This is to Certify that

Soura Upadhyay , *6th Semester-EEE at sir.MVIT*

has attended the Internship program conducted by Harmonizer India Pvt Ltd.,

---

Method to detect, measure, analyze Temperature, Vibration of Electric motor using IIoT and Machine Learning technologies

21st Aug – 20th Sept 2022

M.R.Srinivas - CTO

Harmonizer
Clarity Everywhere

Certificate of Internship

This is to Certify that
Sowmyashree K, *6th Semester-EEE at sir.MVIT*
has attended the Internship program conducted by Harmonizer India Pvt Ltd.,

---

Method to detect, measure, analyze Temperature, Vibration of Electric motor using IIoT and Machine Learning technologies

21st Aug – 20th Sept 2022

M.R.Srinivas - CTO

Harmonizer
Clarity Everywhere

Certificate of Internship

This is to Certify that

SREEJITH C S, ***6th Semester-EEE at sir.MVIT***

has attended the Internship program conducted by Harmonizer India Pvt Ltd.,

---

Method to detect, measure, analyze Temperature, Vibration of Electric motor using IIoT and Machine Learning technologies

21st Aug – 20th Sept 2022

M.R.Srinivas - CTO

Harmonizer
Clarity Everywhere

Certificate of Internship

This is to Certify that

SRIKANTH M, ***6th Semester-EEE at sir.MVIT***

has attended the Internship program conducted by Harmonizer India Pvt Ltd.,

---

Method to detect, measure, analyze Temperature, Vibration of Electric motor using IIoT and Machine Learning technologies

21st Aug – 20th Sept 2022

M.R.Srinivas - CTO

Harmonizer
Clarity Everywhere

Certificate of Internship

This is to Certify that

Suraj Kumar, 6th Semester-EEE at sir.MVIT

has attended the Internship program conducted by Harmonizer India Pvt Ltd.,

---

Method to detect, measure, analyze Temperature, Vibration of Electric motor using IIoT and Machine Learning technologies

21st Aug – 20th Sept 2022

M.R.Srinivas - CTO

Harmonizer
Clarity Everywhere

Certificate of Internship

This is to Certify that
Suyesha Bhattacharjee, *6th Semester-EEE at sir.MVIT*
has attended the Internship program conducted by Harmonizer India Pvt Ltd.,

---

Method to detect, measure, analyze Temperature, Vibration of Electric motor using IIoT and Machine Learning technologies

21st Aug – 20th Sept 2022

M.R.Srinivas - CTO

Certificate of Internship

Harmonizer
Clarity Everywhere

This is to Certify that

SYED IRFAN, *6th Semester-EEE at sir.MVIT*

has attended the Internship program conducted by Harmonizer India Pvt Ltd.,

---

Method to detect, measure, analyze Temperature, Vibration of Electric motor using IIoT and Machine Learning technologies

21st Aug – 20th Sept 2022

M.R.Srinivas - CTO

Harmonizer
Clarity Everywhere

Certificate of Internship

This is to Certify that
Tanya Singh,
6th Semester-EEE at sir.MVIT
has attended the Internship program conducted by Harmonizer India Pvt Ltd.,

---

Method to detect, measure, analyze Temperature, Vibration of Electric motor using IIoT and Machine Learning technologies

21st Aug – 20th Sept 2022

M.R.Srinivas - CTO

GULBARGA ELECTRICITY SUPPLY COMPANY LIMITED
(Wholly Owned by Government of Karnataka)

Office : 08472-256782
E-Mail: dcahrd.gescom@gmail.com

Corporate Office, Station Road
Kalaburagi-585102.

No. GESCOM/GM/DCA (HRD)/G-11/1663A/2022-23/ 52882 Date: 4 FEB 2023

Certificate

Ref: T.O Approved Letter No. GESCOM/GM/DCA(HRD)/G-11/ 1663A/2022-23/28038-52 Dated 05.09.2022.

** *** **

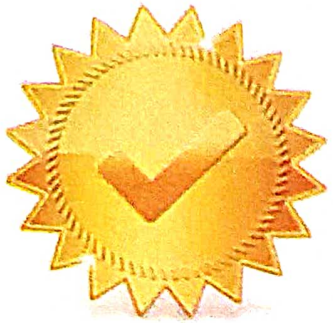
*This is to certify that Miss/Mr. Vilas(USN-***1MV19EE106***) Electrical and Electronics Engineering student of Sir M Visvesvaraya Institute of Technology Collage of Engineering. has done her/his project report on Electrical and Electronics field works GIS Station and 33/11 KV Sub-Station in GESCOM.*

We certify that the above student has carried out all the necessary work in connection with her/his project report to our satisfaction. Duration from 05.09.2022 to 30.09.2022.

She/he is sincere during the above period and shown interest to gain maximum knowledge with guidance of our staff & content in the report differ from original.

We wish all success in her/his academic excellence.

Deputy Controller of Accounts 4/2/23
(HRD)
GESCOM, Kalaburagi.



Harmonizer
Clarity Everywhere

Certificate of Internship

This is to Certify that

YESHWANTH RAJ, *6th Semester-EEE at sir.MVIT*

has attended the Internship program conducted by Harmonizer India Pvt Ltd.,

---

Method to detect, measure, analyze Temperature, Vibration of Electric motor using IIoT and Machine Learning technologies

21st Aug – 20th Sept 2022

M.R.Srinivas - CTO

पीवीयुएन PVUN

पतरातु विद्युत उत्पादन निगम लिमिटेड

PATRATU VIDYUT UTPADAN NIGAM LTD.

(A subsidiary of NTPC in Joint Venture with JBVNL)

पतरातु / Patratu

Ref. No.:070/HR/PVUNL//2022

Dated: 17/09/2022

CERTIFICATE

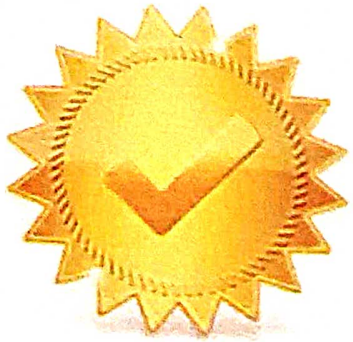
This is to certify that Mis. Zikra Rahman student of 3rd Year, Electrical and Electronics Engineering (EED) from Sir M. Visvesvaray Institute of Technology, Krishnadevarayanagar, Hunasamaranahalli, International Airport Road, Bangalore -562 157, has undergone Vocational Training in Electrical and Electronics Engineering under Reg. No. 033 PVUN, Limited from 21.08.2022 to 10.09.2022.

We wish her all the success in his future endeavors.

(Authorized Signatory)

HR-EDC, PVUN Ltd.

अतुल प्रकाश पूर्ती पीवीयुएन PVUN
ATUL PRAKASH PURTI
वरिष्ठ प्रबंधक (मानव संसाधन) / Senior Manager (HR)
पतरातु विद्युत उत्पादन निगम लिमिटेड
PATRATU VIDYUT UTPADAN NIGAM LIMITED
(A [illegible] with JBVNL)
[illegible] - 829 119



Harmonizer
Clarity Everywhere

Certificate of Internship

This is to Certify that

AKSHATHA K, *6th Semester-EEE at sir.MVIT*

has attended the Internship program conducted by Harmonizer India Pvt Ltd.,

---

Method to detect, measure, analyze Temperature, Vibration of Electric motor using IIoT and Machine Learning technologies

21st Aug – 20th Sept 2022

M.R.Srinivas - CTO

Harmonizer
Clarity Everywhere

Certificate of Internship

This is to Certify that

AMRUTHA GV ***6th Semester-EEE at sir.MVIT***

has attended the Internship program conducted by Harmonizer India Pvt Ltd.

Method to detect, measure, analyze Temperature, Vibration of Electric motor using IIoT and Machine Learning technologies

21st Aug – 20th Sept 2022

M.R.Srinivas - CTO

Harmonizer
Clarity Everywhere

Certificate of Internship

This is to Certify that

ANUPRIYA K V, *6th Semester-EEE at sir.MVIT*

has attended the Internship program conducted by Harmonizer India Pvt Ltd.,

---

Method to detect, measure, analyze Temperature, Vibration of Electric motor using IIoT and Machine Learning technologies

21st Aug – 20th Sept 2022

M.R.Srinivas - CTO

Harmonizer
Clarity Everywhere

Certificate of Internship

This is to Certify that

CHAITRA C, *6th Semester-EEE at sir.MVIT*

has attended the Internship program conducted by Harmonizer India Pvt Ltd.,

---

Method to detect, measure, analyze Temperature, Vibration of Electric motor using IIoT and Machine Learning technologies

21st Aug – 20th Sept 2022

M.R.Srinivas - CTO

Harmonizer
Clarity Everywhere

Certificate of Internship

This is to Certify that

CHARAN PB, *6th Semester-EEE at sir.MVIT*

has attended the Internship program conducted by Harmonizer India Pvt Ltd.,

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Method to detect, measure, analyze Temperature, Vibration of Electric motor using IIoT and Machine Learning technologies

21st Aug – 20th Sept 2022

M.R.Srinivas - CTO

ಭಾರತ್ ಎಲೆಕ್ಟ್ರಾನಿಕ್ಸ್
भारत इलेक्ट्रॉनिक्स
BHARAT ELECTRONICS
QUALITY. TECHNOLOGY. INNOVATION

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कौशल भारत - कुशल भारत

CENTRE FOR LEARNING AND DEVELOPMENT

BHARAT ELECTRONICS LIMITED
(A Govt. of India Enterprise, Ministry of Defence)
Jalahalli Post, Bengaluru - 560 013, India

Certificate

This is to certify that

Sri./Smt/Kum . DHARNEESH . R .....

Ref No. . 1410/CLD/HR/2022-23/27/469 .....

student of . SIR. M. VISVESHVARYA INSTITUTE OF .....

..... TECHNOLOGY . BANGALORE .....

carried out ~~*Project Work*~~*/Internship on* .....

..... OVERVIEW OF ES .....

.....

in . ENGINEERING . SERVICES .....

SBU/CSG of BEL, Bengaluru from . . 07-NOV-2022 .

to . . 06-DEC-2022 . . .

He/She was regular and punctual in his/her attendance and his/her conduct was satisfactory during the period.

Project / Internship Guide

Date : 9/12/22

Place : Bengaluru

शिरीश देशपांडे / SHIRISH DESHPANDE
BCE 209307
उप प्रबंधक / DY. MANAGER
ELECTRICAL / ES
BHARAT ELECTRONICS LIMITED
BANGALORE-560013

Head (HR/CLD)

Certificate of Internship

Harmonizer
Clarity Everywhere

This is to Certify that

ISHRATH KHUSHBUDA, *6th Semester-EEE at sir.MVIT*

has attended the Internship program conducted by Harmonizer India Pvt Ltd.,

---

Method to detect, measure, analyze Temperature, Vibration of Electric motor using IIoT and Machine Learning technologies

21st Aug – 20th Sept 2022

M.R.Srinivas - CTO

Certificate of Internship

Harmonizer
Clarity Everywhere

This is to Certify that

SUNIL R , *6th Semester-EEE at sir.MVIT*

has attended the Internship program conducted by Harmonizer India Pvt Ltd.,

Method to detect, measure, analyze Temperature, Vibration of Electric motor using IIoT and Machine Learning technologies

21st Aug – 20th Sept 2022

M.R.Srinivas - CTO

ಭಾರತ್ ಎಲೆಕ್ಟ್ರಾನಿಕ್
भारत इलेक्ट्रॉनिक्स
BHARAT ELECTRONICS
QUALITY, TECHNOLOGY, INNOVATION

Skill India
कौशल भारत-कुशल भारत

CENTRE FOR LEARNING AND DEVELOPMENT

BHARAT ELECTRONICS LIMITED
(A Govt. of India Enterprise, Ministry of Defence)
Jalahalli Post, Bengaluru - 560 013, India

Certificate

Sri./Smt/Kum . SUSHMA R HIREMATH
Ref No. 1410/CLD/HR/2022-23/27/215
student of . SIR M VISVESVARAYA INSTITUTE OF
TECHNOLOGY BANGALORE
carried out Project Work/Internship on OVERVIEW
OF MISSILE SYSTEM
in MISSILE SYSTEM
SBU/CSG of BEL, Bengaluru from 24 AUG 2022
to 23 SEP 2022

He/She was regular and punctual in his/her attendance and his/her conduct was satisfactory during the period.

Project / Internship Guide

Date : 23-09-2022

Head (HR/CLD)
सुजाता फ्रांसिस / SUJATHA FRANCIS
प्रबंधक (मा. सं / HR)

Harmonizer
Clarity Everywhere

Certificate of Internship

This is to Certify that

SWAPNA N, *6th Semester-EEE at sir.MVIT*

has attended the Internship program conducted by Harmonizer India Pvt Ltd.,

---

Method to detect, measure, analyze Temperature, Vibration of Electric motor using IIoT and Machine Learning technologies

21st Aug – 20th Sept 2022

M.R.Srinivas - CTO

Certificate of Internship

Harmonizer
Clarity Everywhere

This is to Certify that

VARUN B BANAKAR, *6th Semester-EEE at sir.MVIT*

has attended the Internship program conducted by Harmonizer India Pvt Ltd.,

---

Method to detect, measure, analyze Temperature, Vibration of Electric motor using IIoT and Machine Learning technologies

21st Aug – 20th Sept 2022

M.R.Srinivas - CTO

SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGY, BENGALURU-562157

DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

INTERNSHIP STUDENT ACTIVITY

SEMESTER: VIII[TH]

AY: 2022-2023

1. Students Personal Details

Sl. No.	Particulars	
1.	Name of the Student	Tanya Singh
2.	USN	1MV19EE102
3.	Student Contact Number	9002487112
4.	Father/Mother Name with Contact Number	Mrs. Snehlata Singh (7234820132)
5.	Student Mail ID	tanyavn99@gmail.com
6.	Year of Admission	2019

2. Internship Organization Details

Sl. No.	Particulars	
1.	Name of the Company Or Organization with Postal Address	Harmonizer India Private Limited
2.	Name of the Company Supervisor with Phone Number	Minasamudaan Rangaswamy Srinivas (9632822929)
3.	Name of the Internal Guide	Mr. V Rajesh Kumar
4.	Internship Title	Method to detect, measure & analysis of temp., vibration of motor using IOT.
5.	Starting Date (dd/mm/yyyy)	21/02/2022
6.	Ending Date (dd/mm/yyyy)	20/09/2022
7.	Signature of the Student	Tanya.

Internship In-charge
Dr. C. V Mohan

Prof & HOD
Dr. H L Suresh

SRI KRISHNADEVARAYA EDUCATIONAL TRUST'S
SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGY
Krishnadevarayanagar, Hunasamaranahalli, Off International Airport Road, Bangalore-562 157
(Affiliated to Visvesvaraya technological university, recognised by AICTE& Accredited by National Board of Accreditation, New Delhi. An ISO 9001:2008 Certified Institution.)
Ph: 080-2846 7248/2847 7024/25/26 Fax: 080-28467081
E-mail:principal@sirmvit.edu,sirmvitbgl@gmail.com,Web:www.sirmvit.edu
DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

LIST OF MINI PROJECT WORKS DONE BY STDUENTS

AY: 2022-23

Sl. No	USN	Name of Students	Title of the Mini project
1	1MV20EE034	KARTHIK K RATHOD	Power Generation through Speed breakers
	1MV21EE400	ABHISHK D	
	1MV21EE405	BALAJI J C	
	1MV21EE414	MAHESH K S	
2	1MV21EE401	AMARNATH S	Transmission line fault detection
	1MV21EE419	M V TEJASRI	
	1MV21EE420	NAVYA D	
	1MV21EE430	RITHESHKUMAR	
3	1MV20EE014	BASAVESH GADIGESH	Regenerative braking system for EV
	1MV20EE022	DEEKSHA S	
	1MV20EE025	DIVYA K S	
	1MV20EE038	MADAN GOWDA H	
4	1MV20EE009	ANJANA K M	Simulation and implementation of SEPIC fed Multilevel inverter
	1MV20EE018	CHAITHRA R	
	1MV20EE030	H KEERTHANA	
	1MV20EE037	KUSUMA	
5	1MV21EE412	LIKITH GOWDA H S	Aquatic fire extinguisher
	1MV21EE416	MOHAMMED MAAZ	
	1MV21EE434	SAQEEB PASHA	
	1MV21EE444	SUDEEP PATIL	
6	1MV21EE431	ROOPRESH N	Design of simple battery protection system
	1MV21EE436	SELVAN S	
	1MV21EE437	SHARATH KUMAR U	
	1MV21EE442	SRINATH K V	
7	1MV20EE002	ADARSH KUMAR GUPTA	Energy trading platform using block
	1MV20EE005	AMAN KUMAR	

	1MV20EE006	ANAND SINGH	**chain**
	1MV20EE012	AVANEESH PATEL	
8	1MV20EE004	AKHILLAA SRK	**Heat monitoring system for industrial boiler**
	1MV21EE417	MOHAMMED NAWAZ	
	1MV21EE423	POOJA K R	
	1MV21EE443	SUCHITHRA J	
9	1MV20EE028	GANGARAJU R	**Controlling of Electrical Appliances using IoT and Flutter**
	1MV20EE032	HARSHITHA B P	
	1MV21EE421	NIKHIL G	
	1MV21EE439	SHEETHAL C	
10	1MV20EE001	A BHARATH	**Monitoring of Electrical Appliances using Android Application**
	1MV20EE017	CHAITHRA K M	
	1MV20EE021	D S ANIL KUMAR	
	1MV20EE029	GURIJALA SOMANATHA	
11	1MV20EE045	MD HUZEF TATARIA	**Control of Home Appliances by AR**
	1MV20EE073	V NIRANJAN	
	1MV20EE076	VENKATA SUSHEEL	
	1MV20EE077	YASHWANTH YADAV P S	
12	1MV20EE070	USHA M S	**Pole monitoring system**
	1MV20EE074	V ROHITH	
	1MV21EE422	NIKIL MAHESH PATIL	
	1MV21EE438	SHASHIDHAR S	
13	1MV20EE043	MD NAWAZ SHARIF	**IoT based health monitoring system**
	1MV20EE044	MOHITH N	
	1MV20EE052	PRANAV RAJ	
	1MV20EE078	YUVRAJ SINGH	
14	1MV20EE041	MANU PATIL	**Smart energy meter**
	1MV20EE054	PUNITH M R	
	1MV20EE067	SPOORTHI	
	1MV20EE075	VAIBHAVI D TANDEL	
15	1MV20EE023	DHANUSH R	**Aquarium Monitoring and Water Reclamation for Planting**
	1MV20EE064	SHRIKANT SAJJAN	
	1MV20EE065	SMITA T PATIL	
	1MV20EE068	SRUJANA C R	
16	1MV20EE024	DISHA A PATIL	**DC to DC converter 5V to 26V**
	1MV20EE026	DRUTHI N	
	1MV20EE035	KETAN N BABA	
	1MV20EE036	KIRAN C N	
17	1MV20EE015	BHARATH MADIVALAR	**Low power inverter**
	1MV20EE019	CHANDU J	
	1MV20EE039	MALAPPA	
	1MV21EE415	MANOJ KUMAR L	

18	1MV21EE409	INDUMATHI	**Digital locking system**
	1MV21EE426	PRATEEK D	
	1MV21EE435	SARASWATI	
	1MV21EE445	SUHAS R KARNAM	
19	1MV21EE402	AMRUTH KUMAR N	**RFID based smart petrol pump**
	1MV21EE403	ASHOKA K M	
	1MV21EE408	CHETHAN KUMAR S	
	1MV21EE432	SACHIN S KARAGI	
20	1MV21EE406	CHANDAN R	**Automated waste separator for dry and wet waste**
	1MV21EE428	PUNITH KUMAR T L	
	1MV21EE447	SUMITH H V	
	1MV21EE448	UDAY J	
21	1MV20EE046	MONIKA M R	**Wireless EV charging system**
	1MV20EE061	SANIYA	
	1MV21EE427	PUNEETH C G	
	1MV21EE449	VENKATESH K	
22	1MV20EE008	ANIKA KUMARI	**IoT based women safety system**
	1MV20EE011	ARATI	
	1MV20EE042	MAYANK MANU	
	1MV20EE079	TUSHAR KUMAR	
23	1MV20EE056	RAJATH D A	**Arduino functioning robot car using Bluetooth and voice**
	1MV20EE059	SACHIN REDDY	
	1MV20EE060	SANGAMESH TONDIHAL	
	1MV20EE069	UMASHREE R K	
24	1MV20EE040	MANJUNATH G C	**Vehicle accident alert system using vibrating sensor and GPS and GSM**
	1MV20EE047	NAGARJUNA M D	
	1MV20EE049	NITEESH	
	1MV20EE072	UTTAM AMBAPPA	
25	1MV20EE003	AKASH M DODDAMANE	**Gas leakage detector using Arduino**
	1MV20EE016	BHUVAN P M	
	1MV20EE020	CHETHAN H J	
	1MV20EE027	FAHIM KHAN	
26	1MV20EE057	RAKESH B R	**Remote controlled plant watering system using 8051**
	1MV21EE404	B MADHU	
	1MV21EE411	KISHORE	
	1MV21EE413	M MOHANKUMAR	
27	1MV21EE407	CHETAN	**MPPT system with IoT**
	1MV21EE410	JALINDAR	
	1MV21EE441	SHIVALINGAYYA	
	1MV21EE450	MOHAMMAD MAKBUL	
28	1MV20EE010	ANSH KUMAR	**Human following robot**
	1MV20EE055	RAHUL KUMAR	

	1MV20EE058	ROMI SHARMA	
	1MV20EE062	SANSKAR BHATT	
29	1MV20EE031	HARSHITH K M	**IoT based Vehicle Tracking system**
	1MV20EE033	K VAMSHI KRISHNA	
	1MV21EE424	PRAJWAL G	
30	1MV20EE063	SHAIK ABDUL HAMEED	**Obstacle avoiding robot**
	1MV20EE071	UTKARSH SINGH	
	1MV21EE418	MONIKA H	
31	1MV21EE440	SHIVA KUMAR	**Solar tracking with battery management**
	1MV21EE446	SUHEB C N	
	1MV21EE429	RAKSHITA	
	1MV20EE051	P SANTHOSH	

Project Coordinator

PROF. & HEAD
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VISVESVARAYA TECHNOLOGICAL UNIVERSITY

"Jnana Sangama", Belagavi-590 018

Mini Project Report

on

"HEAT MONITORING SYSTEM FOR INDUSTRIAL HOT BOILERS"

submitted in partial fulfillment of the requirements for the award of the Degree of

BACHELOR OF ENGINEERING

IN

ELECTRICAL & ELECTRONICS ENGINEERING

Submitted by

AKHILLAA SRK	**1MV20EE004**
MOHAMMED NAWAZ	**1MV21EE417**
POOJA K R	**1MV21EE423**
SUCHITHRA J	**1MV21EE443**

Under the Guidance of

Dr. PARTHASARATHY V

Associate Professor

Dept. of Electrical & Electronics Eng.,

SIR MVIT, Bengaluru.

Department of Electrical & Electronics Engineering

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2022 – 2023

Sir M. VISVESVARAYA INSTITUTE OF TECHNOLOGY

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Department of Electrical & Electronics Engineering

CERTIFICATE

Certified that the mini project work entitled "***HEAT MONITORING SYSTEM FOR INDUSTRIAL HOT BOILERS***" carried out by **Ms. AKHILLAA SRK (1MV20EE004), Mr. MOHAMMED NAWAZ (1MV21EE417), Ms. POOJA K R (1MV21EE423), Ms. SUCHITHRA J (1MV21EE443),** a bonafide students of **Sir M VISVESVARAYA INSTITUTE OF TECHNOLOGY, Bengaluru** in partial fulfillment for the requirements for the award of the degree of **Bachelor of Engineering** in **Electrical & Electronics Engineering** of the **Visvesvaraya Technological University,** Belagavi during the year **2022-2023.** It is certified that all corrections/suggestions indicated for Internal Assessment have been incorporated in the report deposited in the department library. The mini-Project work report has been approved as it satisfies the academic requirements in respect of mini-project work prescribed for the above-mentioned degree.

Signature of Guide	**Signature of HOD**	**Signature of Principal**
Dr. Parthasarathy V	Dr. H L Suresh	Prof. Rukesh S.G
	19/7/23	
	PROF. & HEAD DEPT. OF ELECTRICAL & ELECTRONICS ENGG SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGY Krishnadevaraya nagar, Hunasamaranahalli (Via) Yelahanka, Bengaluru - 562 157	PRINCIPAL SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGY Krishnadevarayanagar, Hunasamaranahalli International Airport Road, Bangalore-562 157

EXTERNAL VIVA

Name of Examiners	Signature with Date
1. Dr SURESH. H.L	19/7/23
2. HP Keerthana	19/7/23

Sir M. VISVESVARAYA INSTITUTE OF TECHNOLOGY

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Off International Airport Road, Krishnadevaraya Nagar, Bengaluru – 562157

Department of Electrical & Electronics Engineering

DECLARATION

We are hereby declare that the mini project work entitled **"HEAT MONITORING SYSTEM FOR INDUSTRIAL HOT BOILERS"** carried out by us and submitted in partial fulfilment for the award of **Bachelor of Engineering in Electrical & Electronics Engineering of the Visvesvaraya Technological University, Belagavi** during the year 2022-2023. The matter embodied in this mini-project report has not been submitted to any other university or institute for the award of any other degree or diploma.

Place: Bengaluru

Date: 19 / 07 / 2023

AKHILLAA SRK (1MV20EE004)

MOHAMMED NAWAZ (1MV21EE417)

POOJA K R (1MV21EE423)

SUCHITHRA J (1MV21EE443)

ABSTRACT

In our mini-project, we are trying to implement (IoT) in the manufacturing area for monitoring the industrial hot boilers for the safety, increase in the productivity and efficiency of an Industry. In the ongoing processes of the industrial boiler, temperature regulation and control are important. The industrial boiler is more applied in industrial production and life. However, due to the uneven heating of the boiler, the process of using the boiler would result in boiler leakage accidents and cause burns to workers. So, LCD display is used to display temperature and the results are presented as early warning results through thingspeak and buzzer is used to alert. Given the above situation, the intelligent monitoring system of the industrial boiler to achieve safe and stable operation of the boiler. This design uses the temperature measurement method to design the boiler safety warning system based on the temperature sensor. The process takes place in the industry can be controlled from a single monitoring room which reduces the manpower.

VISVESVARAYA TECHNOLOGICAL UNIVERSITY

"Jnana Sangama", Belagavi-590 018

Mini-Project Report

on

"ENERGY TRADING PLATFORM USING BLOCKCHAIN"

submitted in partial fulfillment of the requirements for the award of the Degree of

BACHELOR OF ENGINEERING

IN

ELECTRICAL & ELECTRONICS ENGINEERING

Submitted by

ADARSH KUMAR GUPTA	1MV20EE002
AMAN KUMAR	1MV20EE005
ANAND SINGH	1MV20EE006
AVANEESH PATEL	1MV20EE012

Under the Guidance of

Dr. SURESH H L

Professor & Head

Dept of Electrical and Electronics Engg.,

Sir. MVIT, Bengaluru.

Department of Electrical & Electronics Engineering

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2022 – 2023

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Department of Electrical & Electronics Engineering

CERTIFICATE

Certified that the mini-project work entitled **"ENERGY TRADING PLATFORM USING BLOCKCHAIN"** carried out by **Mr. ADARSH KUMAR GUPTA, USN 1MV20EE002, Mr. AMAN KUMAR, USN 1MV20EE005, Mr. ANAND SINGH, USN 1MV20EE006, Mr. AVANEESH PATEL, USN 1MV20EE012,** bonafide students of **SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGY, Bengaluru** in partial fulfillment for the requirements for the award of the degree of **Bachelor of Engineering** in **Electrical & Electronics Engineering** of the **Visvesvaraya Technological University,** Belagavi during the year **2022-2023.** It is certified that all corrections/suggestions indicated for Internal Assessment have been incorporated in the report deposited in the department library. The Mini-Project work report has been approved as it satisfies the academic requirements in respect of project work prescribed for the above-mentioned degree.

PRINCIPAL
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Krishnadevaraya Nagar, Hunasamaranahalli
International Airport Road, Bangalore-562 157

Signature of Guide
Dr. Suresh H L

18/7/23
Signature of HOD
Dr. Suresh H L

Signature of Principal
Prof. Rakesh S G

PROF. & HEAD
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SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGY
Krishnadevaraya Nagar, Hunasamaranahalli
(Via) Yelahanka, Bengaluru - 562 157

VIVA-VOCE

Name of Examiners	Signature with Date
1. Dr. SURESH. H.L	19/7/23
2. AD Kalyaman	19/7/23

SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGY

(Approved by AICTE New Delhi, Affiliated to VTU, Belagavi, ISO 9001:2008 Certified)

Off International Airport Road, Krishnadevaraya Nagar, Bengaluru – 562157

Department of Electrical & Electronics Engineering

DECLARATION

We hereby declare that the mini-project work entitled **"ENERGY TRADING PLATFORM USING BLOCKCHAIN"**carried out by us and submitted in partial fulfilment for the award of **Bachelor of Engineering in Electrical & Electronics Engineering of the Visvesvaraya Technological University, Belagavi** during the year 2022-2023. The matter embodied in this mini-project report has not been submitted to any other university or institute for the award of any other degree or diploma.

Place: Bengaluru
Date:07/07/2023

ADARSH KUMAR GUPTA
1MV20EE002

AMAN KUMAR
1MV20EE005

ANAND SINGH
1MV20EE006

AVANEESH PATEL
1MV20EE0012

ABSTRACT

The "**Energy Trading Platform using Blockchain**" mini-project proposes a decentralized platform for peer-to-peer energy trading in India. By leveraging blockchain technology, the platform aims to address inefficiencies in the energy sector, promote renewable energy adoption, and enhance energy access. Through smart contracts, secure transactions, and transparent data management, the platform enables consumers to purchase energy directly from nearby renewable energy producers and allows prosumers to sell excess energy. The project fosters a decentralized energy market, reduces reliance on fossil fuels, and contributes to a sustainable energy future in India.

The implementation of this Energy Trading Platform using Blockchain has the potential to revolutionize the energy sector in India, fostering a more efficient, transparent, and sustainable energy ecosystem. By promoting peer-to-peer energy trading, the platform empowers communities, accelerates renewable energy adoption, and stimulates economic growth. The project signifies a significant step towards a greener and more inclusive energy future in India.

VISVESVARAYA TECHNOLOGICAL UNIVERSITY

"Jnana Sangama", Belagavi-590 018

Mini Project Report

on

"DESIGN OF A SIMPLE BATTERY PROTECTION SYSTEM"

Submitted in partial fulfillment of the requirements for the award of the Degree of

BACHELOR OF ENGINEERING

IN

ELECTRICAL & ELECTRONICS ENGINEERING

Submitted by

ROOPESH N	1MV21EE431
SELVAN S	1MV21EE436
SHARATH KUMAR U	1MV21EE437
SRINATH KV	1MV21EE442

Under the Guidance of

Dr. V. PARTHASARETHY
Associate Professor
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2022 – 2023

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Department of Electrical & Electronics Engineering

CERTIFICATE

Certified that the mini project work entitled **"DESIGN OF A SIMPLE BATTERY PROTECTION SYSTEM"** carried out by Mr. Roopesh N (1MV21EE431), Mr. Selvan S (1MV21EE436), Mr. Sharath Kumar U (1MV21EE431), Mr. Srinath KV (1MV21EE44), Bonafide students of **Sir M. VISVESVARAYA INSTITUTE OF TECHNOLOGY, Bengaluru** in partial fulfillment for the requirements for the award of the degree of **Bachelor of Engineering** in **Electrical & Electronics Engineering** of the **Visvesvaraya Technological University,** Belagavi during the year **2022-2023.** It is certified that all corrections/suggestions indicated for Internal Assessment have been incorporated in the report deposited in the department library. The Project work report has been approved as it satisfies the academic requirements in respect of project work prescribed for the above-mentioned degree.

Signature of Guide
Dr. V. Parthasarathy

19/7/23

Signature of HOD
Dr. Suresh H.L.
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Signature of Principal
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Name of Examiners	Signature with Date
1. Dr. [redacted] SURESH H L	19/7/2023
2. HOD Kalyanam	19/7/23

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Off International Airport Road, Krishnadevaraya Nagar, Bengaluru – 562157

Department of Electrical & Electronics Engineering

DECLARATION

We are hereby declare that the mini project work entitled **"DESIGN OF SIMPLE BATTERY PROTECTION SYSTEM"** carried out by me and submitted in partial fulfilment for the award of **Bachelor of Engineering in Electrical & Electronics Engineering of the Visvesvaraya Technological University, Belagavi** during the year 2022-2023.The matter embodied in this project report has not been submitted to any other university or institute for the award of any other degree or diploma.

Place: Bengaluru

Date: 11 / 07 / 2023

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USN: 1MV18EE431

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SHARATH KUMAR U

USN: 1MV21EE437

SRINATH KV

USN: 1MV21EE442

ABSTRACT

The battery management system (BMS) plays a crucial role in the efficient operation and longevity of batteries used in various applications, including electric vehicles and renewable energy storage systems. One significant challenge in battery management is maintaining optimal operating temperatures, as excessive heat can degrade battery performance and lifespan. Our project work explores the concept of an air cooling technique to enhance the efficiency and overall battery performance of BMS. This method utilizes forced air circulation to dissipate heat from the battery cells, effectively regulating their temperatures within acceptable limits. The findings indicate that air cooling can provide adequate thermal management for batteries in a wide range of applications. The use of natural convection, combined with strategically placed cooling elements, can enhance the heat dissipation process and maintain optimal operating temperatures for the batteries. In conclusion, the work demonstrates that air cooling is a viable and effective method for battery management systems. The findings of this study contribute to the development of more efficient and cost-effective battery management systems, further advancing the adoption of batteries in electric vehicles, renewable energy storage, and other applications.

VISVESVARAYA TECHNOLOGICAL UNIVERSITY

"Jnana Sangama", Belagavi-590 018

Mini Project Report

on

"ELECTRICAL POWER GENERATION THROUGH SPEED BREAKER"

Submitted in partial fulfillment of the requirements for the award of the Degree of

BACHELOR OF ENGINEERING

IN

ELECTRICAL & ELECTRONICS ENGINEERING

Submitted by

Mr. KARTHIK K RATHOD	**1MV20EE034**
Mr. ABHISHEK D	**1MV21EE400**
Mr. BALAJI J C	**1MV21EE405**
Mr. MAHESH K S	**1MV21EE414**

Under the Guidance of

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Professor & HOD,

Dept. of Electrical & Electronics Eng.,

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CERTIFICATE

Certified that the mini project work entitled ***"Electrical Power Generation Through Speed Breaker"*** carried out by **Mr. KARTHIK K RATHOD (1MV20EE034), Mr. ABHISHEK D (1MV21EE400), Mr. BALAJI J C (1MV21EE405),Mr. MAHESH K S (1MV21EE414),** a bonafide students of **Sir M VISVESVARAYA INSTITUTE OF TECHNOLOGY, Bengaluru** in partial fulfillment for the requirements for the award of the degree of **Bachelor of Engineering** in **Electrical & Electronics Engineering** of the **Visvesvaraya Technological University,** Belagavi during the year **2022-2023.** It is certified that all corrections/suggestions indicated for Internal Assessment have been incorporated in the report deposited in the department library. The Mini Project work report has been approved as it satisfies the academic requirements in respect of project work prescribed for the above-mentioned degree.

PRINCIPAL
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Signature of Guide	Signature of HOD	Signature of Principal
Dr. Suresh H.L	18/1/23 Dr. Suresh H.L	Prof. Rakesh S.G

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Name of Examiners	Signature with Date
1. Dr SURESH H.L	19/1/23
2. HOD Kathmani	19/1/23

Gr-002

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Off International Airport Road, Krishnadevaraya Nagar, Bengaluru – 562157

Department of Electrical & Electronics Engineering

DECLARATION

We are hereby declare that the mini project work entitled **"Electrical Power Generation through Speed Breaker"** carried out by me and submitted in partial fulfilment for the award of **Bachelor of Engineering in Electrical & Electronics Engineering of the Visvesvaraya Technological University, Belagavi** during the year 2022-2023.The matter embodied in this mini project report has not been submitted to any other university or institute for the award of any other degree or diploma.

Place: Bengaluru

Date: 19/ 07 / 2023

KARTHIK K RATHOD
USN: 1MV20EE034

ABHISHEK D
USN: 1MV21EE400

BALAJI J C
USN: 1MV21EE405

MAHESH K S
USN: 1MV21EE414

ABSTRACT

A large amount of energy is wasted by the vehicles on the speed breakers through friction, every time it passes over it. Energy can be produced by using the vehicle weight and speed. So here we propose a smart speed breaker that generates power. The reciprocating motion of the speed breaker is converted into rotary motion using the rack and pinion arrangement and pressure. We design a smart speed breaker that can pass vehicles coming from both sides and yet generate energy from it. The system makes use of mechanical assembly with hardboard sheets with linkages that spring move by pressure. The system makes use of the speed breaker press and then uses a rack and run generator motor thus generating energy. The mechanism is the used to drive the speed breaker back into original position. It converts rotary motion into linear motion, but sometimes we use them to change linear motion into rotary motion. This mechanism is very economical and easy to install. By doing proper arrangements we may generate high power electricity from road traffic.

Cy-002

VISVESVARAYA TECHNOLOGICAL UNIVERSITY

"Jnana Sangama", Belagavi-590 018

Mini Project Report

on

"TRANSMISSION LINE FAULT DETECTOR"

Submitted in partial fulfillment of the requirements for the award of the Degree of

BACHELOR OF ENGINEERING

IN

ELECTRICAL & ELECTRONICS ENGINEERING

Submitted by

AMARNATH S	**(1MV21EE401)**
M V TEJASRI	**(1MV21EE419)**
NAVYA D	**(1MV21EE420)**
RITHESHKUMAR	**(1MV21EE430)**

Under the Guidance of

Mr. V RAJESH KUMAR,
Assistant Professor
Dept of Electrical &Electronics Engg,
SIR MVIT, Bengaluru.

Department of Electrical & Electronics Engineering

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Off International Airport Road, Krishnadevaraya Nagar, Bengaluru – 562157

Department of Electrical & Electronics Engineering

CERTIFICATE

Certified that the mini project work entitled **"TRANSMISSION LINE FAULT DETECTOR"** carried out by **Mr. AMARNATH S (USN:1MV21EE401), Ms. M V TEJASRI (USN:1MV21EE419), Ms. NAVYA D (USN:1MV21EE420), Mr. RITHESHKUMAR (USN:1MV21EE430),** a bonafide student of **Sir M VISVESVARAYA INSTITUTE OF TECHNOLOGY, Bengaluru** in partial fulfillment for the requirements for the award of the degree of **Bachelor of Engineering** in **Electrical & Electronics Engineering** of the **Visvesvaraya Technological University,** Belagavi during the year **2022-2023.** It is certified that all corrections/suggestions indicated for Internal Assessment have been incorporated in the report deposited in the department library. The Mini Project work report has been approved as it satisfies the academic requirements in respect of the mini project work prescribed for the above-mentioned degree.

Signature of Guide V Rajesh Kumar	Signature of HOD Dr. Suresh H. L	Signature of Principal Prof. Rakesh S G

8/7/23

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Name of Examiners	Signature with date
1. Dr SURESH. H.L	19/7/23
2. HD Kattimani	19/7/23

Sir M VISVESVARAYA INSTITUTE OF TECHNOLOGY

(Approved by AICTE New Delhi, Affiliated to VTU, Belagavi, ISO 9001:2008 Certified)
Off International Airport Road, Krishnadevaraya Nagar, Bengaluru – 562157

Department of Electrical & Electronics Engineering

DECLARATION

We are hereby declare that the mini project work entitled **"TRANSMISSION LINE FAULT DETECTOR"** carried out by me and submitted in partial fulfilment for the award of **Bachelor of Engineering in Electrical & Electronics Engineering of the Visvesvaraya Technological University, Belagavi** during the year 2022- 2023.The matter embodied in this mini project report has not been submitted to any other university or institute for the award of any other degree or diploma.

Place: Bengaluru
Date:19/ 07/2023

AMARNATH S (USN: 1MV21EE401)

M V TEJASRI (USN: 1MV21EE419)

NAVYA D (USN: 1MV21EE420)

RITHESHKUMAR (USN: 1MV21EE430)

ABSTRACT

Electricity has become the most sought-after amenity for all of us. Gone are the days when electricity would only be limited to cities. It is now reaching every distant part of the world. So, we now have a complex network of power systems. This power is being carried by the transmission lines. These lines travel very long distances so while carrying power, fault occurring is natural. These faults damage many vital electrical equipment's-like transformers, generators, transmission lines. For the uninterrupted power supply we need to prevent these faults as much as possible. So we need to detect faults within the shortest possible time. These relays are more reliable and have faster response than the traditional electromechanical relays and Static relays. They have increased range of setting, high accuracy, reduced size, and lower costs, along with many other functions, such as fault event recording, auto resetting, etc. This project is about designing the Numerical relay where the fault is detected when the input value exceeds the reference value set in the relay which then gives the trip signal to the circuit breaker.

The Electric Power System is divided into many different sections. One of which is the transmission system, where power is transmitted from generating stations and substations via transmission lines into consumers. Both methods could encounter various types of malfunctions is usually referred to as a "Fault". Fault is simply defined as a number of undesirable but unavoidable incidents can temporarily disturb the stable condition of the power system that occurs when the insulation of the system fails at any point. Moreover, if a conducting object comes in contact with a bare power conductor, a short circuit, or fault, is said to have occurred. The causes of faults are many, they include lighting, wind damage, trees falling across transmission lines, vehicles or aircraft colliding with the transmission towers or poles, birds shorting lines or vandalism. In this study, the causes and effects of faults in the overhead transmission lines were the focus of the research. Some of the many causes of faults and some detection methods will be discussed. These faults lead to substantial damage to the power system equipment. In India it is common, the faults might be in the supply systems and these faults in three phase supply system can affect the power system.

VISVESVARAYA TECHNOLOGICAL UNIVERSITY

"Jnana Sangama", Belagavi-590 018

Mini Project Report

on

"SIMULATION AND IMPLEMENTATION OF SEPIC FED MULTILEVEL INVERTER"

submitted in partial fulfillment of the requirements for the award of the Degree of

BACHELOR OF ENGINEERING

IN

ELECTRICAL & ELECTRONICS ENGINEERING

Submitted by

BASAVESH G ANGADI(1MV20EE014)
DEEKSHA S (1MV20EE022)
DIVYA K S(1MV20EE025)
MADAN GOWDA H(1MV20EE038)

Under the Guidance of

MR. KUMARA SWAMY
Assistant Professor
Dept of Electrical & Electronics Eng.,
SIRMVIT, Bengaluru.

Department of Electrical & Electronics Engineering

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2022 – 2023

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Department of Electrical & Electronics Engineering

CERTIFICATE

Certified that the mini project work entitled **"SIMULATION AND IMPLEMENTATION OF SEPIC FED MULTILEVEL INVERTER"** carried out by **Mr. BASAVESH G ANGADI, USN 1MV20EE014, Ms. DEEKSHA S , USN 1MV20EE022, Ms. DIVYA K S, USN 1MV20EE025, Mr. MADAN GOWDA H, USN 1MV20EE038,,** a bonafide students of **Sir M VISVESVARAYA INSTITUTE OF TECHNOLOGY, Bengaluru** in partial fulfillment for the requirements for the award of the degree of **Bachelor of Engineering** in **Electrical & Electronics Engineering** of the **Visvesvaraya Technological University,** Belagavi during the year **2022-2023.** It is certified that all corrections/suggestions indicated for Internal Assessment have been incorporated in the report deposited in the department library. The Project work report has been approved as it satisfies the academic requirements in respect of project work prescribed for the above-mentioned degree.

PRINCIPAL
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International Airport Road, Bengaluru - 562 157

Signature Guide
.....

Signature of HOD
Dr. Suresh H L
PROF. & HEAD
DEPT. OF ELECTRICAL & ELECTRONICS ENGG.
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Signature of Principal
Prof. Rakesh S.G

EXTERNAL VIVA

Name of Examiners	Signature with Date
1. Dr. SURESH - H.L	19/7/23
2. HD Keshavaraj	19/7/23

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Department of Electrical & Electronics Engineering

DECLARATION

We are hereby declare that the mini project work entitled **"SIMULATION AND IMPLEMENTATION OF SEPIC FED MULTILEVEL INVERTER"** carried out by me and submitted in partial fulfilment for the award of **Bachelor of Engineering in Electrical & Electronics Engineering of the Visvesvaraya Technological University, Belagavi** during the year 2022-2023.The matter embodied in this project report has not been submitted to any other university or institute for the award of any other degree or diploma.

Place: Bengaluru

Date: 07 / 07 / 2023

BASAVESH G ANGADI
USN:1MV20EE014

DEEKSHA S
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DIVYA K S
USN:1MV20EE025

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USN:1MV20EE038

ABSTRACT

This project focuses on the simulation and implementation of a SEPIC-fed multilevel inverter for efficient power conversion. The combination of a SEPIC converter and a multilevel inverter offers advantages such as improved power quality better voltage regulation.

The project involves the design and simulation of the SEPIC converter using suitable control strategies to regulate the input DC voltage. This converter acts as the input stage for the multilevel inverter. The multilevel inverter, consisting of power electronic switches and capacitors, generates a multilevel AC output voltage waveform.

The simulation is performed using software tools like MATLAB/Simulink. The design parameters and control strategies for the SEPIC converter and multilevel inverter are optimized to achieve desired performance characteristics such as high efficiency.

After successful simulation, the project proceeds to the implementation phase. The hardware components required for the SEPIC-fed multilevel inverter are selected and assembled. The control circuitry, including microcontrollers is programmed to regulate the SEPIC converter and control the switching of power electronic devices in the multilevel inverter.

The implemented system is tested and validated for its performance. The output voltage waveform is analyzed for its quality voltage regulation. Efficiency measurements are also taken to evaluate the system's power conversion capabilities.

The results obtained from the simulation and implementation are compared, and any discrepancies or deviations are identified and analyzed. Further improvements or modifications are made to optimize the system's performance.

Overall, this project aims to demonstrate the feasibility and effectiveness of using a SEPIC-fed multilevel inverter for efficient power conversion. It showcases the advantages of this configuration and provides insights into the design, simulation, and implementation aspects of such a system.

VISVESVARAYA TECHNOLOGICAL UNIVERSITY

"Jnana Sangama", Belagavi-590 018

Mini Project Report

On

"ACOUSTIC FIRE EXTINGUISHER"

submitted in partial fulfillment of the requirements for the award of the Degree of

BACHELOR OF ENGINEERING

IN

ELECTRICAL & ELECTRONICS ENGINEERING

Submitted by

ANJANA K M	[1MV20EE009]
CHAITHRA R	[1MV20EE018]
H KEERTANA	[1MV20EE030]
KUSUMA	[1MV20EE037]

Under the Guidance of

Mrs .P. Sumalatha

Assistant Professor

Dept of Electrical & Electronics Engg.,

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Department of Electrical & Electronics Engineering

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2022 – 2023

Sir M VISVESVARAYA INSTITUTE OF TECHNOLOGY

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Department of Electrical & Electronics Engineering

CERTIFICATE

Certified that the mini project work entitled **"Acoustic Fire Extinguisher"** carried out by **Ms. ANJANA K M [1MV20EE009], Ms.CHAITHRA R [1MV20EE018], Ms.H KEERTANA [1MV20EE030], Ms.KUSUMA [1MV20EE037]** a bonafide students of **Sir M VISVESVARAYA INSTITUTE OF TECHNOLOGY, Bengaluru** in partial fulfillment for the requirements for the award of the degree of **Bachelor of Engineering** in **Electrical & Electronics Engineering** of the **Visvesvaraya Technological University, Belagavi** during the year **2022-2023.** It is certified that all corrections/suggestions indicated for Internal Assessment have been incorporated in the report deposited in the department library. The mini project work report has been approved as it satisfies the academic requirements in respect of mini project work prescribed for the above-mentioned degree.

Signature Guide Mrs. P Sumalatha	**Signature of HOD** Dr. Suresh H. L PROF. & HEAD DEPT. OF ELECTRICAL & ELECTRONICS ENGG. SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGY Krishnadevarayanagar, Hunasamaranahalli (Via) Yelahanka, Bengaluru - 562 157	**Signature of Principal** Prof. Rakesh S.G PRINCIPAL SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGY Krishnadevarayanagar, Hunasamaranahalli International Airport Road, Bangalore-562 157

EXTERNAL VIVA

Name of Examiners	Signature with Date
1. Dr. SURESH H.L	19/07/23
2.	

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Department of Electrical & Electronics Engineering

DECLARATION

We are hereby declare that the mini project work entitled **"Acoustic Fire Extinguisher"** carried out by me and submitted in partial fulfilment for the award of **Bachelor of Engineering in Electrical & Electronics Engineering of the Visvesvaraya Technological University, Belagavi** during the year 2022-2023.The matter embodied in this mini project report has not been submitted to any other university or institute for the award of any other degree or diploma.

Place: Bengaluru

Date: 07/07/2023

ANJANA K M

[1MV20EE009]

CHAITHRA R

[1MV20EE018]

H KEERTANA

[1MV20EE030]

KUSUMA

[1MV20EE037]

ABSTRACT

Fire is a particularly feared hazard. Therefore, a fire extinguisher is very important equipment. Unfortunately, existing fire extinguisher has some drawbacks such as using a chemical compound which is dangerous and it leaves a residue. Current extinguishers contain different kinds of chemicals depending upon their application. There are many extinguishing agents like water, potassium bicarbonate, foam etc. All these agents have a common property of leaving by-products behind it. Innovative methods are necessary to minimize the generation of this waste. The need for innovation and modernization in fire extinguishing techniques is extremely necessary. Study shows that sound waves could be one of the potential alternatives for extinguishing fires. Acoustic pressure and air velocity produced from a speaker is the fundamental concept used to explain how sound waves put off flames. In this project, we proposed a new method using the sound wave to extinguisher fire. Our method was using a speaker and a converging tube to focus the sound wave to overcome the fire energy and thus put the fire down. The aim is to develop a portable fire extinguisher to study and analyzes the effect of different frequency of a sound wave on flames.

VISVESVARAYA TECHNOLOGICAL UNIVERSITY

"Jnana Sangama", Belagavi-590 018

Mini Project Report

on

"GAS LEKAGE DETECTOR USING ARDUINO"

submitted in partial fulfillment of the requirements for the award of the Degree of

BACHELOR OF ENGINEERING

IN

ELECTRICAL & ELECTRONICS ENGINEERING

Submitted by

AKASH M DODDAMANE	**1MV20EE003**
BHUVAN P M	**1MV20EE016**
CHETHAN HJ	**1MV20EE020**
FAHIM KHAN	**1MV20EE027**

Under the Guidance of

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Department of Electrical & Electronics Engineering

CERTIFICATE

Certified that the mini project work entitled "*Gas Leakage detector Using Arduino* " carried out by Mr. **AKASH M DODDAMANE, USN 1MV2OEE003, Mr. BHUVAN P M, USN 1MV20EE016, Mr. CHETHAN HJ, USN 1MV20EE020, Mr. FAHIM KHAN, USN 1MV20EE027**, bonafide students of **Sir M VISVESVARAYA INSTITUTE OF TECHNOLOGY, Bengaluru** in partial fulfillment for the requirements for the award of the degreeof **Bachelor of Engineering** in **Electrical & Electronics Engineering** of the **Visvesvaraya Technological University,** Belagavi during the year **2022-2023.** It is certified that all corrections/suggestions indicated for Internal Assessment have been incorporated in the report deposited in the department library. The mini Project work report has been approved as it satisfies the academic requirements in respect of mini project work prescribed for the above-mentioned degree.

Signature Guide Dr. Mahesh .K	**Signature of HOD** Dr. Suresh H.L	PRINCIPAL SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGY Krishnadevaraya Nagar, Hunasamaranahalli Bangalore-562 157 **Signature of Principal** Prof. Rakesh S.G

EXTERNAL VIVA

Name of Examiners	**Signature with Date**
1. Prof H.D Kattimani	
2. R. Sivapriyan	12/7/23

Sir M. VISVESVARAYA INSTITUTE OF TECHNOLOGY

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Off International Airport Road, Krishnadevaraya Nagar, Bengaluru – 562157

Department of Electrical & Electronics Engineering

DECLARATION

We are hereby declare that the mini project work entitled **"Gas Leakage Detector Using Arduino"** carried out by me and submitted in partial fulfilment for the award of **Bachelor of Engineering in Electrical & Electronics Engineering of the Visvesvaraya Technological University, Belagavi** during the year 2022-2023.The matter embodied in this mini project report has not been submitted to any other university or institute for the award of any other degree or diploma.

Place: Bengaluru

Date: 11/ 07 / 2023

AKASH M DODDAMANE (1MV20EE003)

BHUVAN P M (1MV20EE016)

CHETHAN HJ (1MV20EE020)

FAHIM KHAN (1MV20EE027)

ABSTRACT

Gas leakage is a significant safety concern in various residential, commercial, and industrial environments. Detecting gas leaks promptly is crucial to prevent potential accidents, property damage, and harm to human health. The Gas Leakage Detector (GLD) employs a gas sensor to detect the presence of hazardous gases, such as methane, propane, or carbon monoxide. The sensor provides an analog output, which is processed by the Arduino microcontroller. The Arduino reads the analog values from the gas sensor, applies calibration techniques, and performs data analysis to determine the gas concentration in the environment. To alert users of potential gas leaks, the GLD incorporates various output mechanisms. These may include visual indicators, such as LEDs, to display the gas concentration levels, as well as audible alarms, such as buzzers or sirens, to attract attention. This flexibility allows users to tailor the gas leakage detection system to their specific requirements, whether it is for personal use or for larger-scale deployments in commercial or industrial settings. The gas leakage detection system using Arduino offers a cost-effective andefficient solution for enhancing safety measures against potential gas hazards. By leveraging Arduino's simplicity and versatility, the gas leakage detector becomes a valuable tool for gas detection, prevention, and mitigation, ultimately contributing to a safer environment for both individuals and businesses.

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VISVESVARAYA TECHNOLOGICAL UNIVERSITY

"Jnana Sangama", Belagavi-590018

Mini Project Report

On

"REMOTE CONTROL PLANT WATERING SYSTEM USING 8051"

submitted in partial fulfillment of the requirements for the award of the Degree of

BACHELOR OF ENGINEERING

IN

ELECTRICAL & ELECTRONICS ENGINEERING

Submitted by

RAKESH B R	1MV20EE057
B MADHU	1MV21EE404
KISHOR R HASILKAR	1MV21EE411
M MOHANKUMAR	1MV21EE413

Under the Guidance of

Mr.Siddappaji M R
Assistant Professor
Dept of Electrical & Electronics Engineering,
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Department of Electrical & Electronics Engineering

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Department of Electrical & Electronics Engineering

CERTIFICATE

Certified that the mini project work entitled "REMOTE CONTROL PLANT WATERING SYSTEM USING 8051" carried out by **Mr. RAKESH B R, USN 1MV20EE057, Mr. B MADHU, USN 1MV21EE404 , Mr. KISHOR R HASILKAR , USN 1MV21EE411 , Mr. M MOHANKUMAR , USN 1MV21EE413** a bonafide students of **Sir M VISVESVARAYA INSTITUTE OF TECHNOLOGY, Bengaluru** in partial fulfillment for the requirements for the award of the degree of **Bachelor of Engineering** in **Electrical & Electronics Engineering** of the **Visvesvaraya Technological University,** Belagavi during the year **2022-2023.** It is certified that all corrections/suggestions indicated for Internal Assessment have been incorporated in the report deposited in the department library. The mini project work report has been approved as it satisfies the academic requirements in respect of mini project work prescribed for the above-mentioned degree.

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International Airport Road, Bengaluru-562 157

Signature of the Guide Mr. Siddappaji M R	**Signature of the HOD** Dr. H. L. Suresh	**Signature of the Principal** Prof. Rakesh S.G

PROFESSOR & HEAD
DEPT. OF ELECTRICAL & ELECTRONICS ENGG.
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EXTERNAL VIVA

Name of Examiners

1. Prof. H.D. Kattimani
2. P. Sivapriyan

Signature with Date

12/7/23

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Off International Airport Road, Krishnadevaraya Nagar, Bengaluru – 562157

Department of Electrical & Electronics Engineering

DECLARATION

We are hereby declare that the mini project work entitled **"REMOTE CONTROL PLANT WATERING SYSTEM USING 8051"** carried out by us and submitted in partial fulfilment for the award of **Bachelor of Engineering in Electrical & Electronics Engineering of the Visvesvaraya Technological University, Belagavi** during the year 2022-2023.The matter embodied in this mini project report has not been submitted to any other university or institute for the award of any other degree.

Place: Bengaluru

Date:07/7/2023

RAKESH B R

1MV20EE057

B MADHU

1MV21EE404

KISHOR R HASILKAR

1MV21EE411

M MOHANKUMAR

1MV21EE413

ABSTRACT

This is the mini project designed to control Plant watering using a standard TV remote. IR sensor is interfaced to the control unit for sensing the IR signals transmitted by the remote. This data is conveyed to the control unit which switches the DC water Pump on or off as desired. An 8051 series microcontroller is used in this mini project as controller. The 8051 controller receives IR signals sent from the remote using IR module and then operates the motor to achieve the desired plant watering.

Hence with this mini project one can water the plant easily only by pressing some buttons on his TV remote.

VISVESVARAYA TECHNOLOGICAL UNIVERSITY

"Jnana Sangama", Belagavi-590 018

Mini Project

Report on

MAXIMUM POWER POINT TRACKING SYSTEM WITH IOT

submitted in partial fulfillment of the requirements for the award of the Degree of

BACHELOR OF ENGINEERING

IN

ELECTRICAL & ELECTRONICS ENGINEERING

Submitted by

CHETAN	1MV21EE407
JALINDAR	1MV21EE410
SHIVALINGAYYA	1MV21EE441
MAHAMMAD MAKBUL	1MV21EE450

Under the Guidance of

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Department of Electrical & Electronics Engineering

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Department of Electrical & Electronics Engineering

CERTIFICATE

Certified that the mini project work entitled "MAXIMUM POWER POINT TRACKING SYSTEM WITH IOT" carried out by **Mr. CHETAN 1MV21EE407, Mr. JALINDAR 1MV21EE410, Mr. SHIVALINGAYYA 1MV21EE441, Mr. MAHAMMAD MAKBUL 1MV21EE450** a bonafide students of **Sir M VISVESVARAYA INSTITUTE OF TECHNOLOGY, Bengaluru** in partial fulfillment for the requirements for the award of the degree of **Bachelor of Engineering in Electrical & Electronics Engineering** of the **Visvesvaraya Technological University,** Belagavi during the year **2022-2023.** It is certified that all corrections/suggestions indicated for Internal Assessment have been incorporated in the report deposited in the department library. The Project work report has been approved as it satisfies the academic requirements in respect of project work prescribed for the above-mentioned degree.

Signature Guide	**Signature of HOD**	**Signature of Principal**
Prof. Suma K. Nayak	Dr. H L Suresh	Prof. Rakesh S.G
		PRINCIPAL SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGY Krishnadevaraya Nagar, Gunjur Post, Kasaba Hobli, Varthur, International Airport Road, Bangalore-562 157

EXTERNAL VIVA

Name of Examiners	**Signature with Date**
1. PROF. H.D. KATTIMANI	12/12/23
2. R. SIVAPRIYAN	12/12/23

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Department of Electrical & Electronics Engineering

DECLARATION

We are hereby declare that the mini project work entitled **"MAXIMUM POWER POINT TRACKLING SYSTEM WITH IOT"** carried out by me and submitted in partial fulfilment for the award of **Bachelor of Engineering in Electrical & Electronics Engineering of the Visvesvaraya Technological University, Belagavi** during the year 2022-2023.The matter embodied in this project report has not been submitted to any other university or institute for the award of any other degree or diploma.

Place: Bengaluru

Date:07/7/2023

CHETAN

1MV21EE407

JALINDAR

1MV21EE410

SHIVALINGAYYA

1MV21EE441

MAHAMMAD MAKBUL

1MV21EE450

Abstract

A substantial technological growth of the photovoltaic systems has occurred around the world during the recent years enhancing the availability of electric energy in an environment friendly way. Internet of Things (IoT) is one of the emerging technologies having a great potential to apply in the area of renewable energy, especially on solar PV cell. Maximum power production is the general criteria for any solar PV cell. The maximum power point tracking technique enables maximization of the energy production of PV cell during partial shading conditions. Thus, the overall efficiency of the photovoltaic energy production system is increased. Numerous techniques have been proposed during the last decade for implementing the maximum power point tracking process in a photovoltaic system. This article proposed a novel idea of interfacing IOT system with PV cell in partial shading condition and applied MPPT method to analyze and demonstrate their performance features.

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VISVESVARAYA TECHNOLOGICAL UNIVERSITY

"Jnana Sangama", Belagavi-590 018

Mini-Project Report

on

"HUMAN FOLLOWING ROBOT USING ARDUINO UNO"

submitted in partial fulfillment of the requirements for the award of the Degree of

BACHELOR OF ENGINEERING

IN

ELECTRICAL & ELECTRONICS ENGINEERING

Submitted by

Mr. ANSH KUMAR	**1MV20EE010**
Mr. RAHUL KUMAR	**1MV20EE055**
Mr. ROMI SHARMA	**1MV20EE058**
Mr. SANASKAR BHATT	**1MV20EE062**

Under the Guidance of

MR.PRADEEP KUMAR

Assistant Professor

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Department of Electrical & Electronics Engineering

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2022 – 2023

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Department of Electrical & Electronics Engineering

CERTIFICATE

Certified that the mini-project work entitled "*HUMAN FOLLOWING ROBOT USING ARDUINO UNO*" carried out by **Mr. ANSH KUMAR (1MV20EE010), Mr.RAHUL KUMAR(1MV20EE055), Mr. ROMI SHARMA (1MV20EE058), Mr. SANSKAR BHATT(1MV20EE062)** bonafide students of **Sir M. VISVESVARAYA INSTITUTE OF TECHNOLOGY, Bengaluru** in partial fulfillment for the requirements for the award of the degree of **Bachelor of Engineering** in **Electrical & Electronics Engineering** of the **Visvesvaraya Technological University,** Belagavi during the year **2022-2023.** It is certified that all corrections/suggestions indicated for Internal Assessment have been incorporated in the report deposited in the department library. The Mini-Project work report has been approved as it satisfies the academic requirements in respect of mini-project work prescribed for the above mentioned degree.

Signature of Guide	Signature of HOD	Signature of Principal
Mr. PRADEEP KUMAR	Dr. H L SURESH	Prof. RAKESH S.G

14/7/23

PRINCIPAL
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Krishnadevaraya Nagar, Yelahanka, Bangalore-562 157

EXTERNAL VIVA

Name of Examiners	Signature with Date
1 R.SIVAPAIYAN	14/7/23
2. DR. MADHU PALATI	14/7/23

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Department of Electrical & Electronics Engineering

DECLARATION

We are hereby declare that the mini-project work entitled **"HUMAN FOLLOWING ROBOT ARDUINO UNO"** carried out by us and submitted in partial fulfilment for the award of **Bachelor of Engineering in Electrical & Electronics Engineering of the Visvesvaraya Technological University, Belagavi** during the year 2022-2023.The matter embodied in this mini-project report hasn't been submitted to any other university or institute for the award of any other degree or diploma.

Place: Bengaluru

Date:

ANSH KUMAR (1MV20EE0010)

RAHUL KUMAR (1MV20EE055)

ROMI SHARMA (1MV20EE058)

SANSKAR BHATT (1MV20EE062)

ABSTRACT

The human following robot using arduino uno project aims to develop an autonomous robot capable of tracking and following a human target. The project utilizes computer vision techniques, sensor fusion, and a control system to achieve accurate and reliable human tracking. Therobot platform is designed to navigate in indoor environments, equipped with perceptionsensors such as cameras or depth sensors. The perception system employs object detection and tracking algorithms to detect and estimate the position of the human target. Sensor fusion techniques are applied to enhance tracking accuracy by combining data from multiple sensors. The control system generates navigation commands for the robot to follow the human target while avoiding obstacles. The robot exhibits safe and socially acceptable behavior by maintaining an appropriate distance and adapting to the human's movements. The project evaluates the robot's performance in terms of tracking accuracy,responsiveness, obstacle avoidance capability, and user experience. The results demonstrate the effectiveness of the human following robot in real-time tracking scenarios. The project highlights the potential applications of such robots in security, surveillance, and assistance domains and suggests areas for future research and improvement, such as advanced perception techniques and human-robot interaction.

VISVESVARAYA TECHNOLOGICAL UNIVERSITY

"Jnana Sangama", Belagavi-590 018

Mini Project Report

on

"ELECTRICAL POWER GENERATION THROUGH SPEED BREAKER"

Submitted in partial fulfillment of the requirements for the award of the Degree of

BACHELOR OF ENGINEERING

IN

ELECTRICAL & ELECTRONICS ENGINEERING

Submitted by

Mr. KARTHIK K RATHOD	**1MV20EE034**
Mr. ABHISHEK D	**1MV21EE400**
Mr. BALAJI J C	**1MV21EE405**
Mr. MAHESH K S	**1MV21EE414**

Under the Guidance of

Dr. SURESH H.L.

Professor & HOD,

Dept. of Electrical & Electronics Eng.,

SIRMVIT, Bengaluru.

Department of Electrical & Electronics Engineering

Sir M VISVESVARAYA INSTITUTE OF TECHNOLOGY

(Approved by AICTE New Delhi, Affiliated to VTU, Belagavi, ISO 9001:2008 Certified)

Off International Airport Road, Krishnadevaraya Nagar, Bengaluru – 562157

2022 – 2023

Sir M VISVESVARAYA INSTITUTE OF TECHNOLOGY

(Approved by AICTE New Delhi, Affiliated to VTU, Belagavi, ISO 9001:2008 Certified)

Off International Airport Road, Krishnadevaraya Nagar, Bengaluru – 562157

Department of Electrical & Electronics Engineering

CERTIFICATE

Certified that the mini project work entitled ***"Electrical Power Generation Through Speed Breaker"*** carried out by **Mr. KARTHIK K RATHOD (1MV20EE034), Mr. ABHISHEK D (1MV21EE400), Mr. BALAJI J C (1MV21EE405),Mr. MAHESH K S (1MV21EE414),** a bonafide students of **Sir M VISVESVARAYA INSTITUTE OF TECHNOLOGY, Bengaluru** in partial fulfillment for the requirements for the award of the degree of **Bachelor of Engineering** in **Electrical & Electronics Engineering** of the **Visvesvaraya Technological University,** Belagavi during the year **2022-2023.** It is certified that all corrections/suggestions indicated for Internal Assessment have been incorporated in the report deposited in the department library. The Mini Project work report has been approved as it satisfies the academic requirements in respect of project work prescribed for the above-mentioned degree.

Signature of Guide Dr. Suresh H.L	**Signature of HOD** Dr. Suresh H.L	**Signature of Principal** Prof. Rakesh S.C

PRINCIPAL
SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGY
Krishnadevaraya Nagar, Yelahanka
International Airport Road, Bangalore-562 157

EXTERNAL VIVA

Name of Examiners	**Signature with Date**
1. Dr SURESH H.L	19/7/23
2. HD Kathinani	19/7/23

Sir M VISVESVARAYA INSTITUTE OF TECHNOLOGY

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Off International Airport Road, Krishnadevaraya Nagar, Bengaluru – 562157

Department of Electrical & Electronics Engineering

DECLARATION

We are hereby declare that the mini project work entitled **"Electrical Power Generation through Speed Breaker"** carried out by me and submitted in partial fulfilment for the award of **Bachelor of Engineering in Electrical & Electronics Engineering of the Visvesvaraya Technological University, Belagavi** during the year 2022-2023.The matter embodied in this mini project report has not been submitted to any other university or institute for the award of any other degree or diploma.

Place: Bengaluru

Date: 19/ 07 / 2023

KARTHIK K RATHOD

USN: 1MV20EE034

ABHISHEK D

USN: 1MV21EE400

BALAJI J C

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MAHESH K S

USN: 1MV21EE414

ABSTRACT

A large amount of energy is wasted by the vehicles on the speed breakers through friction, every time it passes over it. Energy can be produced by using the vehicle weight and speed. So here we propose a smart speed breaker that generates power. The reciprocating motion of the speed breaker is converted into rotary motion using the rack and pinion arrangement and pressure. We design a smart speed breaker that can pass vehicles coming from both sides and yet generate energy from it. The system makes use of mechanical assembly with hardboard sheets with linkages that spring move by pressure. The system makes use of the speed breaker press and then uses a rack and run generator motor thus generating energy. The mechanism is the used to drive the speed breaker back into original position. It converts rotary motion into linear motion, but sometimes we use them to change linear motion into rotary motion. This mechanism is very economical and easy to install. By doing proper arrangements we may generate high power electricity from road traffic.

VISVESVARAYA TECHNOLOGICAL UNIVERSITY

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Department of Electrical & Electronics Engineering

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EXTERNAL VIVA

Name of Examiners	**Signature with Date**
1. Dr SURESH H-L	19/7/23
2. HD Kotresh	19/7/23

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Signature of Guide	Signature of HOD	Signature of Principal
Dr. Suresh H.L	Dr. Suresh H.L	

EXTERNAL VIVA

Name of Examiners	Signature with Date
1. Dr SURESH H.L	19/7/23
2. HD Kotyamani	19/7/23

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Place: Bengaluru

Date: 19/ 07 / 2023

KARTHIK K RATHOD

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VISVESVARAYA TECHNOLOGICAL UNIVERSITY

"Jnana Sangama", Belagavi-590 018

Mini Project Report

on

"VEHICLE ACCIDENT ALERT SYSTEM USING VIBRATION SENSOR, GPS AND GSM MODULE"

Submitted in partial fulfillment of the requirements for the award of the Degree of

BACHELOR OF ENGINEERING

IN

ELECTRICAL & ELECTRONICS ENGINEERING

Submitted by

MANJUNATH G C	**(1MV20EE040)**
NAGARJUNA M D	**(1MV20EE047)**
NITEESH	**(1MV20EE049)**
UTTAM BHAVIMANI	**(1MV20EE072)**

Under the Guidance of

Mr. BHASKAR C
Assistant Professor
Dept. of Electrical & Electronics Eng.,
SIR MVIT, Bengaluru

Department of Electrical & Electronics Engineering

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Off International Airport Road, Krishnadevaraya Nagar, Bengaluru – 562157

Department of Electrical & Electronics Engineering

CERTIFICATE

Certified that the mini project work entitled **"VEHICLE ACCIDENT ALERT SYSTEM USING VIBRATION SENSOR, GPS AND GSM MODULE"** carried out by **Mr. MANJUNATH G C, USN 1MV20EE040, Mr. NAGARJUNA M D, USN 1MV20EE047, Mr. NITEESH, USN 1MV20EE049, Mr. UTTAM BHAVIMANI, USN 1MV20EE072,** a bonafide student of **Sir M VISVESVARAYA INSTITUTE OF TECHNOLOGY, Bengaluru** in partial fulfillment for the requirements for the award of the degree of **Bachelor of Engineering** in **Electrical & Electronics Engineering** of the **Visvesvaraya Technological University,** Belagavi during the year **2022-2023.** It is certified that all corrections/suggestions indicated for Internal Assessment have been incorporated in the report deposited in the department library. The mini project work report has been approved as it satisfies the academic requirements in respect of the mini project work prescribed for the above-mentioned degree.

PRINCIPAL
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Signature of Guide
Mr. Bhaskar C

PROF. & HEAD
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Krishnadevaraya Nagar, Bengaluru-562 157

Signature of Principal
Prof. Rakesh S G

EXTERNAL VIVA

Name of Examiners	Signature with date
1. R SIVAPRIYAN	12/9/23
2. PROF. H D KATTIMANI	12/9/23

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Off International Airport Road, Krishnadevaraya Nagar, Bengaluru – 562157

Department of Electrical & Electronics Engineering

DECLARATION

We are hereby declare that the mini project work entitled **"VEHICLE ACCIDENT ALERT SYSTEM USING VIBRATION SENSOR, GPS AND GSM MODULE"** carried out by us and submitted in partial fulfilment for the award of **Bachelor of Engineering in Electrical & Electronics Engineering of the Visvesvaraya Technological University, Belagavi** during the year 2022-2023.The matter embodied in this mini project report has not been submitted to any other university or institute for the award of any other degree or diploma.

Place: Bengaluru

Date: 11/ 07/ 2023

MANJUNATH G C (USN: 1MV20EE040)

NAGARJUNA M D (USN: 1MV20EE047)

NITEESH (USN: 1MV20EE049)

UTTAM BHAVIMANI (USN: 1MV20EE072)

ABSTRACT

Vehicle alert system today is getting tougher with the passage of time, and it is getting difficult to keep track of these vehicles for safety purposes. People today are more concerned about keeping them safe using the latest technology. We must verify the vehicle's condition and location. In this project, we can monitor the location of the vehicle and send accident notifications. If the vehicle meets with an accident, the vibration sensor detects the vibration above the threshold range and the mems sensor detects the axis of the vehicle, then a message will be sent to the respective person along with GPS location. Road accidents rates are very high nowadays, especially two wheelers. Timely medical aid can help in saving lives. This system aims to alert the nearby medical centre about the accident to provide immediate medical aid. Thus, the systems will make the decision and sends the information to the smartphone, connected to the accelerometer through gsm and GPS modules. The Android application in the mobile phone will send text messages to the nearest medical centre and friends. Application also shares the exact location of the accident and it can save time.

VISVESVARAYA TECHNOLOGICAL UNIVERSITY

"Jnana Sangma", Belagavi-590 018

Mini-Project Report

on

"WIRELESS ELECTRIC VEHICLE CHARGING SYSTEM"

submitted in partial fulfillment of the requirements for the award of the Degree of

BACHELOR OF ENGINEERING

IN

ELECTRICAL & ELECTRONICS ENGINEERING

Submitted by

Ms. MONIKA M R	**1MV20EE046**
Ms. SANIYA	**1MV20EE061**
Mr. PUNEETH C G	**1MV21EE427**
Mr. VENKATESH K	**1MV21EE449**

Under the Guidance of

Dr. SURESH H.L

Professor & HOD

Department of Electrical & Electronics

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2022 – 2023

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Off International Airport Road, Krishnadevaraya Nagar, Bengaluru – 562157

Department of Electrical & Electronics Engineering

CERTIFICATE

Certified that the mini-project work entitled "**Wireless Electric Vehicle Charging System**" carried out by **Ms. MONIKA M R (1MV20EE046), Ms. SANIYA (1MV20EE061), Mr. PUNEETH C G (1MV21EE427), Mr. VENKATESH K (1MV21EE449)**, bonafide students of **Sir M.VISVESVARAYA INSTITUTE OF TECHNOLOGY, Bengaluru** in partial fulfillment for the requirements for the award of the degreeof **Bachelor of Engineering** in **Electrical & Electronics Engineering** of the **Visvesvaraya Technological University**, Belagavi during the year **2022-2023**. It is certified that all corrections/suggestions indicated for Internal Assessment have been incorporated in the report deposited in the department library. The Mini-Project work report has been approved as it satisfies the academic requirements in respect of mini-project work prescribed for the above-mentioned degree.

Signature of Guide	Signature of HOD	Signature of Principal
Dr. Suresh H.L	Dr. Suresh H.L	Prof. Rakesh S G

EXTERNAL VIVA

Name of Examiners	Signature with Date
1. R. SivaPriyan	
2. Prof. H D. Kattimani	

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Department of Electrical & Electronics Engineering

DECLARATION

We are hereby declaring that the mini-project work entitled **"Wireless Electric Vehicle Charging System"** carried out by us and submitted in partial fulfilment for the award of **Bachelorof Engineering in Electrical & Electronics Engineering of the Visvesvaraya Technological University, Belagavi** during the year 2022-2023.The matter embodied in this mini-project report hasnot been submitted to any other university or institute for the award of any other degree or diploma.

Place: Bengaluru

Date: 12/07/2023

MONIKA M R (1MV20EE046)

SANIYA (1MV20EE061)

PUNEETH C G (1MV21EE427)

VENKATESH K (1MV21EE449)

ABSTRACT

Electric vehicles are today's zero emission vehicular technology which are considered as the future of automotive industry. The batteries of the vehicles get charged in order to drive the vehicle. The methodology of charging the electric vehicle currently is through plug-in method where the charging station charges the battery of an electric vehicle. However, an alternative method for charging the battery of an electric vehicle is through Wireless Power Transfer where it can be as a Static or Dynamic charging systems. Static Charging System can be implemented to charge the batteries of the electric vehicles when the vehicle is parked in static mode. Dynamic Charging System can be implemented to charge when the vehicle is in motion. This method of wireless charging of electric vehicle is done through inductive power transfer where wireless transmission of power is achieved by mutual induction of magnetic field between transmitter and receiver coil. The state of the battery is monitored using Battery Management system (BMS). This paper attempts to review about the difference between plug-in and wireless charging of vehicle, operational principle of wireless charging, types of charging systems, static and dynamic wireless charging, application of dynamic charging system in future and drawbacks of wireless electric vehicle charging.

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Department of Electrical & Electronics Engineering

CERTIFICATE

Certified that the mini-project work entitled **"RFID-BASED SMART PETROL PUMP"** carried out by Mr. Amruth kumar N (1MV21EE402), Mr. Ashoka K M (1MV21EE403), Mr. Chethan kumar S (1MV21EE408), Mr. Sachin s karagi (1MV21EE432), Bonafide students of **Sir M. Visvesvaraya Institute of Technology, Bengaluru** in partial fulfilment for the requirements for the award of the degree of **Bachelor of Engineering in Electrical & Electronics Engineering** of the **Visvesvaraya Technological University, Belagavi** during the year **2022-2023.** It is certified that all corrections/suggestions indicated for Internal Assessment have been incorporated in the report deposited in the department library. The Mini-Project work report has been approved as it satisfies the academic requirements in respect of mini-project work prescribed for the above-mentioned degree.

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Signature of Guide
Mrs. Vijayalakshmi A.K

12/7/23

Signature of HOD
Dr. Suresh H. L.

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Prof. Rakesh S. G.

EXTERNAL VIVA

Name of Examiners	Signature with Date
1. R. SIVAPRIYAN	– R. Siva 12/7/23
2. Prof. H.D. KATTIMANI	12/7/23