



**Dr. Ambedkar Institute of Technology**  
**Electronics and communication Department**

The enclosed documents are valid and verified.

HOD

ECE Department

**HOD**

**Dept. of Electronics and Communication Engg.**

**Dr. Ambedkar Institute of Technology**

**Bengaluru - 560056**

**Department of Electronics & Communication Engg.**  
**PROJECT LIST FOR THE ACADEMIC YEAR 2021-22**

Team No.	Students Name	USN	Project Title	Guide	Place of work
1.	Lakshmi Janaki K Uma Maheswari P Reshma D Jayanth D	IDA18EC069 IDA18EC148 IDA18EC111 IDA18EC056	Multimedia Sentiment Analysis on Public Social Networks using NLP	Swamy T N	Dr. A.I.T.
2.	Suraj H P Skanda G Shobith G Bharam Shetty Srikanth P S	IDA18EC140 IDA18EC131 IDA18EC127 IDA18EC136	IOT Based Smart and Unified Electronic Voting System Using Aadhar and Biometric Authentication	Dr. Rangaswamy Y	Dr. A.I.T.
3.	Sagar Rajanal Shashank J S Shreedhara G Vijayakumar Arahunasi	IDA18EC116 IDA18EC124 IDA18EC128 IDA18EC154	UV Sanitization Mobile Robot	Anand H D	Dr. A.I.T.
4.	Aneesha Islam Ankitha K P Anusha M Hemanth M R	IDA18EC012 IDA18EC015 IDA18EC020 IDA18EC052	Closed-Loop X-Y-Z Arm for Intrinsic Design	Mohan Kumar V	Dr. A.I.T.
5.	Anurag Kumar Jha Ayush Ranjan Srivastava Ankur Singh Naveen Krishna	IDA18EC018 IDA18EC024 IDA18EC016 IDA18EC087	Finger Print Voting System	B S Sudha	Dr. A.I.T.
6.	Saurav M Shashank J Sreekiran B Vignesh P	IDA18EC120 IDA18EC123 IDA18EC135 IDA18EC153	Design of Low Power Multiplier	Manjula N	Dr. A.I.T.
7.	Vaishnavi S Doddamani Ambika K Bindu B J Preethi P	IDA18EC164 IDA18EC166 IDA19EC406 IDA19EC423	Public Water Supply Grid Monitoring and Rain Water Harvesting Using IOT	Divya A	Dr. A.I.T.
8.	Kumarswamy R Munikrishna V Nikhil V K Pavan Raj R	IDA18EC067 IDA18EC083 IDA18EC090 IDA18EC095	Smart Wearable System For Patients With Respiratory Disorders Using IoT	Dr. Umadevi H	Dr. A.I.T.
9.	Akasha K R Akhil Dev B Bathala Viswanath Chinmay M	IDA18EC004 IDA18EC005 IDA18EC026 IDA18EC036	Development of haptic prosthetic hand for realization of intuitive operation	Shwetha M	Dr. A.I.T.
10	Shalini M. Swaroop Soumya Patil Tejaswini C Gadag Vaishnavi B Bhat	IDA18EC122 IDA18EC132 IDA18EC145 IDA18EC150	Mechanical Ventilator With vital parametrs Monitoring for Covid-19 Patients	B S Sudha	Dr. A.I.T.
11	K Shreyas Keerthi B Likith Kumar Gowda Rakesh D	IDA18EC059 IDA18EC065 IDA18EC076 IDA18EC105	IOT Based Public Transport Management System	Triveni	Dr. A.I.T.

12	Kavitha G Kulal Uttam Rajendra M L Vidhya Parichay Kumar N	IDA18EC062 IDA18EC066 IDA18EC077 IDA18EC094	Dual Axis Solar Tracker	Dr. S Ramesh	Dr. A.I.T.
13	Shobha K Spoorthy N V Shwetha S	IDA18EC126 IDA18EC134 IDA18EC130	IOT and MI Based Forest Monitoring and Unearthing Species	Dr. Tanuja P	Dr. A.I.T.
14	Shaikh Shadab Hossain Surya AM Ullas C	IDA18EC121 IDA18EC142 IDA18EC147	Development of Computational System using Quantum Computing	Girija S	Dr. A.I.T.
15	Swikriti Gupta Thanmayi S Soundarya Lalhmingmawia	IDA18EC144 IDA18EC146 IDA18EC133 IDA18EC072	Novel Approach for Charging Electric Vehicle using Magnetic Resonance Coupling and DC Charging	Harsha R	Dr. A.I.T.
16	Anmol V Hemsuriya M Roshal KM Vaibhav S	IDA18EC017 IDA18EC053 IDA18EC113 IDA18EC149	Anti-Poaching System	Shwetha N	Dr. A.I.T.
17	Supriya A M Supriya H Vedala Dinesh Kavya R	IDA18EC138 IDA18EC139 IDA18EC152 IDA18EC063	Machine Learning Based Text to Speech Converter for Visually Impaired	Vidyashree C	Dr. A.I.T.
18	Anushree H K Archana K P Bindu V Grishma Yadav N	IDA18EC021 IDA18EC022 IDA18EC031 IDA18EC045	Satellite Tracking System	Mohan Kumar V	Dr. A.I.T.
19	Vineetha.V Yashaswini.A Yashaswini.S	IDA18EC158 IDA18EC159 IDA18EC160	Virtual Telemedicine System for Remote Health Monitoring	Mala Sinnoor	Dr. A.I.T.
20	Jamiksha Rani G Lavanya N Navya Shree Nethra TN	IDA19EC412 IDA19EC417 IDA19EC419 IDA19EC420	Sign Language to Speech Conversion using Arduino	Sajidha Thabassum .B	Dr. A.I.T.
21	Kavitha Lakshmi Sai T Leelvathi N V Pallavi B A	IDA18EC061 IDA18EC070 IDA18EC074 IDA18EC093	Pothole detection and Crash avoidance	Dr. Tanuja P	Dr. A.I.T.
22	Adithya Lokanath Anish V Akshay Muttappa Mang Guruprasad K S	IDA18EC002 IDA18EC013 IDA18EC009 IDA18EC046	Artificially Intelligent Autonomous Robot	C S Kavitha Devi	Dr. A.I.T.
23	Jamaluddin Hamza Ali Mrunal Singh V Nandini Dey Priyanka	IDA18EC055 IDA18EC082 IDA18EC086 IDA18EC102	Design of Pseudo-Random Bit Generator for Text Encryption	G S Pushpalatha	Dr. A.I.T.
24	Punitha S N Rajath R Navalgi Raksha A Vijaykumarn	IDA19EC424 IDA19EC428 IDA19EC429 IDA19EC436	Real Time Object Counting And Measurement using Computer Vision	MalaSinnoor	Dr. A.I.T.
25	Bhavya V Bhumika K. Y Sowmya B. A Vijayalakshmi P	IDA19EC403 IDA19EC404 IDA19EC435 IDA19EC437	Women Safety App in Mobile Application	Dr. Shivaputra	Dr. A.I.T.
26	Dikshith G Ishitha N	IDA18EC040 IDA18EC054	Soil Micro-Nutrients Detection With Crop and Fertilizer	Girija S	Dr. A.I.T.

			Recommendation System		
27	Sachin Ramachandra Achari Sachin Subrahmanya Shet Vinay Kumar H S Vinod	IDA19EC433 IDA19EC434 IDA19EC438 IDA19EC439	Railway register and track safety monitoring system	K N Hemalatha	Dr. A.I.T.
28	Akhilesh Bagalkot B E Raja Prasad Goled Arvind Kumar	IDA18EC007 IDA18EC025 IDA18EC098 IDA18EC023	IOT Based Informative For Examination Centers	Sangeetha N	Dr. A.I.T.
29	Anitha G S Bhavana S J Jayashree A M	IDA18EC014 IDA18EC028 IDA18EC057	Computer vision system for railway track crack detection using ML approach	Spoorthi P	Dr. A.I.T.
30	Bhoomika S Chethan M C Geetha D C Prem P Chulaki	IDA18EC030 IDA18EC035 IDA18EC044 IDA18EC100	IOT Based Intelligent Management For Agricultural Process Using Raspberry Pi	Dr. Chethan S	Dr. A.I.T.
31	Hiraman Nuthan Kumar Pramoda H v Radhika R	IDA19EC410 IDA19EC421 IDA19EC422 IDA19EC426	Emergency Cost Effective Portable Ventilator System with Live Tracking	Kesthara V	Dr. A.I.T.
32	Aashrithest H G Deepak S Kiran S L Likitha H T	IDA19EC400 IDA19EC408 IDA19EC413 IDA19EC418	Solar Powered Wheel Chair With Voice Controller and Gesture Controller	K N Hemalatha	Dr. A.I.T.
33	Akhila M Chandana K C Kiran Kumar Ranjitha T V	IDA18EC006 IDA18EC034 IDA19EC414 IDA19EC430	Smart Wheelchair for Disabled Persons through IOT	Dr. J S Baligar	Dr. A.I.T.
34	Harsha Kg Devayya Suraj P H Lallawmawma	IDA18EC049 IDA18EC038 IDA18EC446 IDA18EC047	A Real-Time Pothole Detection and Clearance Robot	Ripal Patel	Dr. A.I.T.
35	A Akshaya Amulya M B Harshitha M D Jeevitha K	IDA18EC001 IDA18EC011 IDA18EC051 IDA18EC058	Simulation of Bastion Host in Cloud using Terraform	Siddesh K	Dr. A.I.T.
36	Anusha Bhuvana R Hebbar Divya Yadav N E G D Akshay Kumar	IDA18EC019 IDA18EC041 IDA18EC043	FPGA Implementation of Advanced Hamming Codes to Detect and Correct Single Bit Errors in CAN Protocol	H S Nagaratna	Dr. A.I.T.
37	Rahul BN Rathin Gowda KG Kishor C Rohit	IDA18EC104 IDA19EC110 IDA19EC415 IDA19EC431	Prediction and Analysis of Water Requirements in Automated Irrigation System using Artificial Neural Network and LORA Tech	Dr. Umadevi H	Dr. A.I.T.
38	Manjunatha Gowda N Prateek P D Pritam Sarkar Rakshithgowda K M	IDA18EC078 IDA18EC099 IDA18EC101 IDA18EC108	Militia sixth sense	Kavya S	Dr. A.I.T.
39	Bhargav D R Bhavya S	IDA18EC027 IDA18EC029	Object Detection using Deep Learning	C S Kavitha Devi	Dr. A.I.T.
40	Keerthana.N Mohnish.S Nagarjun.B.M Ramya.B.S	IDA18EC064 IDA18EC081 IDA18EC085 IDA18EC109	Mathematical Model of Battery Management System using Simulink and Design of Electric Vehicle	Harsha R	Dr. A.I.T.

41	Pushpa P Rakshith S Sagar M S Santhosh H M	1DA18EC103 1DA18EC107 1DA18EC115 1DA18EC118	Underwater Communication System using Li-Fi Technology	G S Pushpalatha	Dr. A.I.T.
42	Bindhu K G Deepa Jacqueline S Roza R	1DA19EC405 1DA19EC407 1DA19EC411 1DA19EC432	IOT Based Smart Cold Storage System for Efficient Stock Management	Dr. Shivaputra	Dr. A.I.T.
43	Vikas B S Vinaykumar G S Vinay R	1DA18EC155 1DA18EC156 1DA18EC157	Design of Micro Strip Patch Antenna Array for 5G Wireless communication Applications	Dr. Meenakshi L Rathod	Dr. A.I.T.
44	Sachin K Sanketh G Y Suresh T R Yuvaraj M K	1DA18EC114 1DA18EC117 1DA18EC141 1DA18EC163	Real time women security system using IOT	Dr. Shilpa K C	Dr. A.I.T.
45	Kuruba Abhishek Lalramkinlova Mani N R Peram Venkata Chaitanya Reddy	1DA18EC068 1DA18EC073 1DA18EC084 1DA18EC096	Arduino Based Vehicle Accident Rescue System Using GSM, GPS and MEMS Accelerometer	Sajidha Thabassum .B	Dr. A.I.T.
46	Shayana Saritha G Yashodha S T Pushpa N	1DA18EC125 1DA18EC119 1DA18EC161 1DA19EC425	AI based soil testing and smart voice assistance for agriculture	Dr. Chethan S	Dr. A.I.T.
47	Akash R H R Varunkumar Karthik Bhat Y Prajwal R	1DA18EC003 1DA18EC048 1DA18EC060 1DA18EC165	Coal Mine Safety Monitoring and Alerting System	Dr. Meenakshi L Rathod	Dr. A.I.T.
48	Likhith D Manohar V Naveen S Niranjan Kumar R	1DA18EC075 1DA18EC079 1DA18EC088 1DA18EC091	Advanced wheel chair design for paralyzed patents using MEMS and ML	Nithyashree.S	Dr. A.I.T.
49	Ambika V S Divyashree K Kowsalya H T Raghavendra Naik	1DA19EC402 1DA19EC409 1DA19EC416 1DA19EC427	Biometric Based Smart ATM	Sujay SN	Dr. A.I.T.
50	Akshay Bhat M Akshay V Naik Darshan K Edwin R	1DA18EC008 1DA18EC010 1DA18EC037 1DA18EC042	Digital FM demodulator for satcom and other application	Shwetha M	ISRO, Bangalore
51	Suhas M Shreyas H C Yathish T	1DA18EC137 1DA18EC129 1DA18EC451	CYPHER CONNECT USING Advance Encryption Standard [AES] 256-bit GCM and End-to-end encryption	Dr. Mahalinga V Mandi	Dr. A.I.T.

  
**HOD**

**Dr. AMBEDKAR INSTITUTE OF TECHNOLOGY**  
Mallathahalli, Bengaluru - 560056

**Department of Electronics & Communication Engineering**



***Certificate***

Certified that the project work entitled “MULTIMEDIA SENTIMENT ANALYSIS ON PUBLIC SOCIAL NETWORKS USING NLP”, carried out by **Jayanth D**, bearing USN:1DA18EC056, **Lakshmi Janaki K**, bearing USN:1DA18EC069, **Reshma D**, bearing USN:1DA18EC111, **Uma Maheswari P**, bearing USN:1DA18EC148, bonafide students of Dr. Ambedkar Institute of Technology, Bengaluru – 560056 in partial fulfillment for the award of Bachelor of Engineering in Electronics and Communication Engineering of the Visvesvaraya Technological University, Belagavi during the year 2021–2022. It is certified that all the corrections/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.

**Signature of the guide**  
**(Swamy T.N)**  
**Assistant Professor**

**Signature of the HOD**  
**(Dr. Ramesh S)**

**Dept. of Electronics and Communication Engg.**  
**Dr. Ambedkar Institute of Technology**  
**Bengaluru - 560056**

**Signature of the Principal**  
**(Dr. Meenakshi M)**

***External Viva***  
**Name of the Examiners**

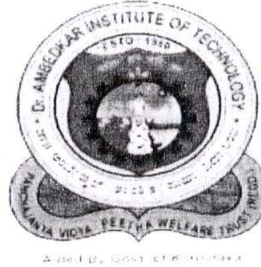
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**Dr. AMBEDKAR INSTITUTE OF TECHNOLOGY**  
**Mallathahalli, Bengaluru - 560056**

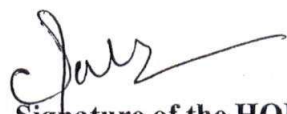
**Department of Electronics & Communication Engineering**




***Certificate***

Certified that the project work entitled “**IoT Based Smart and Remote Electronic Voting System using Aadhar and Dual Biometric Authentication**”, carried out by **Suraj H P**, bearing USN **1DA18EC140**, **Skanda G**, bearing USN **1DA18EC131**, **Shobith G Bharamshetty** bearing USN **1DA18EC127**, **Srikanth P S** bearing USN **1DA18EC136** bonafide students of Dr. Ambedkar Institute of Technology, Bengaluru – 560056 in partial fulfillment for the award of Bachelor of Engineering in Electronics and Communication Engineering of the Visvesvaraya Technological University, Belagavi during the year 2021–2022. It is certified that all the corrections/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.

  
**Signature of the guide**  
**(Dr. Rangaswamy Y)**  
Asst. Professor

  
**Signature of the HOD**  
**(Dr. Ramesh S)**

  
**Signature of the Principal**  
**(Dr. Meenakshi M)**

HOD  
Dept. of Electronics and Communication Engg.  
Dr. Ambedkar Institute of Technology  
Bengaluru - 560056

**External Viva**  
**Name of the Examiners**

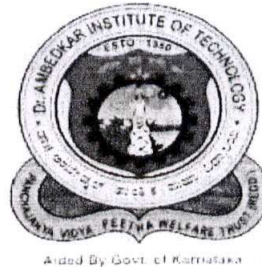
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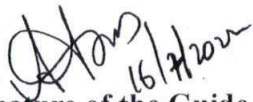
**Dr.AMBEDKAR INSTITUTE OF TECHNOLOGY**  
**Mallathahalli, Bengaluru -560056**

**Department of Electronics & Communication Engineering**

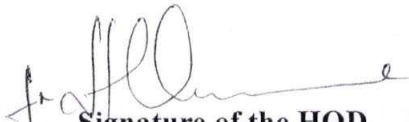


***Certificate***

Certified that the project work entitled “UV SANITIZATION MOBILE ROBOT”, carried out by **SAGAR RAJANAL**, bearing USN:1DA18EC116 ,**SHASHANK J S**, bearing USN:1DA18EC124, **SHREEDHARA G**, bearing USN:1DA18EC128, **VIJAYAKUMAR ARAHUNASI**, bearing USN:1DA18EC154, bonafide students of Dr.Ambedkar Institute of Technology, Bengaluru – 560056 in partial fulfillment for the award of Bachelor of Engineering in Electronics and Communication Engineering of the Visvesvaraya Technological University, Belagavi during the year 2021–2022. It is certified that all the corrections/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.

  
16/7/2022

**Signature of the Guide**  
(Anand H D, Asst. Professor)

  
HOD

**Signature of the HOD**  
(Dr. Ramesh S)



**Signature of the Principal**  
(Dr. Meenakshi M)

Dept. of Electronics and Communication Engg.  
Dr. Ambedkar Institute of Technology  
Bengaluru - 560056

**External Viva**  
**Name of the Examiners**

**Signature with Date**

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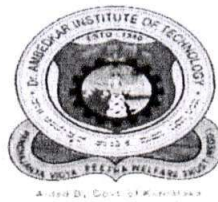
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# Dr AMBEDKAR INSTITUTE OF TECHNOLOGY

Mallathahalli, Bengaluru - 560056

Department of Electronics & Communication Engineering



## CERTIFICATE

Certified that the project work entitled “CLOSED X-Y-Z ARM FOR INTRICATE DESIGN”, carried out by ANEESHA ISLAM, USN: 1DA18EC012, ANKITHA K P, USN: 1DA18EC015, ANUSHA M, USN: 1DA18EC020, and HEMANTH M R, USN: 1DA18EC052 bonafide students of Dr Ambedkar Institute of Technology, Bengaluru – 560056 in partial fulfilment for the award of Bachelor of Engineering in Electronics and Communication Engineering of the Visvesvaraya Technological University, Belagavi during the year 2021–2022 It is certified that all the corrections/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.

Signature of the internal guide

MOHAN KUMAR V  
Assistant Professor  
Dr.AIT

Signature of the HOD

Dr RAMESH S  
Prof and Head  
Dr.AIT  
Dept. of Electronics and Communication Engg  
Dr. Ambedkar Institute of Technology  
Bengaluru - 560056

Signature of the Principal

Dr Meenakshi M  
Principal  
Dr.AIT

External Viva:

Name of the Examiners

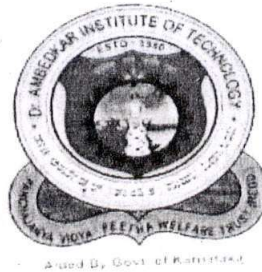
1. Dr Umadevi. H
2. SHILPA V.

Signature with Date

[Signature] 12/7/22  
[Signature] 12/7/22

**Dr. AMBEDKAR INSTITUTE OF TECHNOLOGY**  
**Mallathahalli, Bengaluru - 560056**

**Department of Electronics & Communication Engineering**



## *Certificate*

Certified that the project work entitled "Fingerprint Voting System", carried out by Ankur Singh, bearing USN: 1DA18EC016, Anurag Kumar Jha, bearing USN:1DA18EC018, Ayush Ranjan Srivastava, bearing USN 1DA18EC024, Naveen Krishna USN 1DA18EC087 bonafide students of Dr. Ambedkar Institute of Technology, Bengaluru – 560056 in partial fulfillment for the award of Bachelor of Engineering in Electronics and Communication Engineering of the Visvesvaraya Technological University, Belagavi during the year 2021–2022. It is certified that all the corrections/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.

*Sudha B S*  
18/7/2022  
**Signature of the guide**  
Prof B. S. Sudha  
Associate Professor

*Ramesh S.*  
**Signature of the HOD**  
(Dr. Ramesh S.)  
HOD

*Meenakshi M.*  
**Signature of the Principal**  
(Dr. Meenakshi M.)

Dept. of Electronics and Communication Engg.  
Dr. Ambedkar Institute of Technology  
Bengaluru - 560056

**External Viva**  
**Name of the Examiners**

1. Dr. Chudamani 19

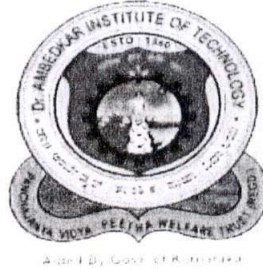
2. SHILPA V

*Shilpa V*  
**Signature with Date**  
18/7/22

*Shilpa V*  
18/7/22

**Dr. AMBEDKAR INSTITUTE OF TECHNOLOGY**  
**Mallathahalli, Bengaluru - 560056**

**Department of Electronics & Communication Engineering**



***Certificate***

Certified that the project work entitled “**DESIGN OF LOW POWER MULTIPLIER**”, carried out by **SAURAV M**, bearing USN: 1DA18EC120, **SHASHANK J**, bearing USN:1DA18E123, **SREEKIRAN B**, bearing USN: 1DA18EC135, **VIGNESH P**, bearing USN: 1DA18E153, bonafide students of Dr. Ambedkar Institute of Technology, Bengaluru – 560056 in partial fulfillment for the award of Bachelor of Engineering in Electronics and Communication Engineering of the Visvesvaraya Technological University, Belagavi during the year 2021–2022. It is certified that all the corrections/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.

**Signature of the Guide**  
**(Manjula N, Asst. Professor)**

**Signature of the HOD**  
**(Dr. Ramesh S)**  
**HOD**

**Signature of the Principal**  
**(Dr. Meenakshi M)**

Dept. of Electronics and Communication Engg.,  
Dr. Ambedkar Institute of Technology  
Bengaluru - 560056

**External Viva**  
**Name of the Examiners**

**Signature with Date**

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# DR AMBEDKAR INSTITUTE OF TECHNOLOGY

(Near Jnana Bharathi Campus, Mallathalli, Bangalore-560056)

(An Autonomous Institution, Affiliated to Visvesvaraya Technological University, Belagavi, Aided by Government of Karnataka)

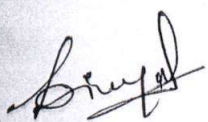
## DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING




### CERTIFICATE

Certified that the project work entitled “PUBLIC WATER SUPPLY GRID MONITORING AND RAIN WATER HARVESTING USING IOT“, carried out by VAISHNAVI S DODDAMANI, bearing USN:1DA18EC164, AMBIKA K, bearing USN:1DA18EC166, BINDU B J, bearing USN:1DA19EC406, PREETHI P, bearing USN:1DA19EC423 bonafide students of Dr. Ambedkar Institute of Technology, Bengaluru – 560056 in partial fulfillment for the award of Bachelor of Engineering in Electronics and Communication Engineering of the Visvesvaraya Technological University, Belagavi during the year 2021 – 2022. It is certified that all the connections/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.


Signature of the Guide

  
(Divya A)

Signature of the HOD

  
(Dr. Ramesh.S)  
HOD

Signature of the Principal

  
(Dr. Meenakshi M)

**External Viva**

Name of the Examiners

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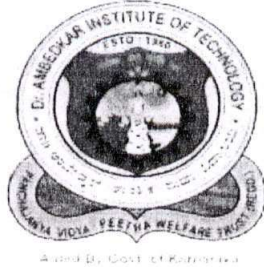
Dept. of Electronics and Communication En.  
Dr. Ambedkar Institute of Technology  
Bengaluru - 560056

Signature with Date

# Dr. AMBEDKAR INSTITUTE OF TECHNOLOGY

Mallathahalli, Bengaluru -560056

Department of Electronics & Communication Engineering



## Certificate

Certified that the project work entitled “Smart Wearable System For Patients With Respiratory Disorders Using IOT”, carried out by KUMARSWAMY R, bearing USN: 1DA18EC067, MUNIKRISHNA V, bearing USN:1DA18EC083, NIKHIL V K, bearing USN:1DA18EC090, PAVAN RAJ R, bearing USN:1DA18EC095, bonafide students of Dr. Ambedkar Institute of Technology, Bengaluru – 560056 in partial fulfillment for the award of Bachelor of Engineering in Electronics and Communication Engineering of the Visvesvaraya Technological University, Belagavi during the year 2021 – 2022. It is certified that all the corrections/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.

Signature of the guide  
(Dr. Umadevi H, Professor)

Signature of the HOD  
(Dr. Ramesh S)

Signature of the Principal  
(Dr. Meenakshi M)

Dept. of Electronics and Communication Engg.,  
Dr. Ambedkar Institute of Technology  
Bengaluru - 560056

### External Viva

Name of the Examiners

Signature with Date

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**Dr. AMBEDKAR INSTITUTE OF TECHNOLOGY**  
**Mallathahalli, Bengaluru - 560056**


**Department of Electronics & Communication Engineering**




## *Certificate*

Certified that the project work entitled "Development of Haptic Prosthetic Hand for Realization Of intuitive operation", carried out by Akasha K R bearing USN: 1DA18EC004, Akhil Dev B, bearing USN:1DA18EC005, Bathala Viswanath, bearing USN:1DA18EC026, Chinmay M, bearing USN:1DA18EC036 bonafide students of Dr. Ambedkar Institute of Technology, Bengaluru – 560056 in partial fulfillment for the award of Bachelor of Engineering in Electronics and Communication Engineering of the Visvesvaraya Technological University, Belagavi during the year 2021–2022. It is certified that all the corrections/suggestions indicated for Internal Assessment have been incorporated in the Report deposited in the departmental library. The projectreport has been approved as it satisfies the academic requirements.

  
**Signature of the guide**  
(Shwetha M.)  
(Assistant Professor)

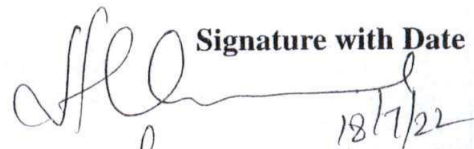
  
**Signature of the HOD**  
(Dr. Ramesh S.)

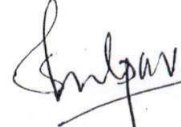
  
**Signature of the Principal**  
(Dr. Meenakshi M.)

**External Viva**  
**Name of the Examiners**

1. Dr Umadevi H

2. SHILPA V.

  
**Signature with Date**  
18/7/22

  
18/7/22

**Dr. AMBEDKAR INSTITUTE OF TECHNOLOGY**  
**Mallathahalli, Bengaluru - 560056**

**Department of Electronics & Communication Engineering**



***Certificate***

Certified that the project work entitled “**Mechanical Ventilator with Vital Parameters Monitoring for COVID-19 Patients during Emergency**”, carried out by Shalini M. Swaroop, bearing USN: 1DA18EC122, Soumya Patil, bearing USN: 1DA18EC132, Tejaswini C. Gadag, bearing USN: 1DA18EC145 and Vaishnavi B. Bhat bearing USN: 1DA18EC150 bonafide students of Dr. Ambedkar Institute of Technology, Bengaluru – 560056 in partial fulfillment for the award of Bachelor of Engineering in Electronics and Communication Engineering of the Visvesvaraya Technological University, Belagavi during the year 2020–2021. It is certified that all the corrections/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.

*Sudha B.S.*  
16/7/2022

**Signature of the guide**

**Sudha B.S.**

**(Associate Professor)**

*Hll*

**Signature of the HOD**

**Dr. Ramesh S.**

Dept. of Electronics and Communication Engg.  
Dr. Ambedkar Institute of Technology  
Bengaluru - 560056

**Signature of the Principal**

**Dr. Meenakshi M.**

**External Viva**

**Name of the Examiners**

1. Dr. Umadevi H

2. Dr. SRIVIDYA .P

**Signature with Date**

*Hll*  
19/7/22  
*Meenakshi M.*  
19/7/22

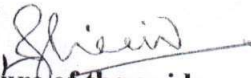
**Dr. AMBEDKAR INSTITUTE OF TECHNOLOGY**  
**Mallathahalli, Bengaluru - 560056**


**Department of Electronics & Communication Engineering**

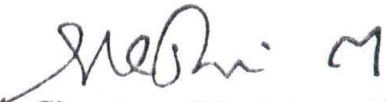


## *Certificate*

Certified that the project work entitled “**IOT BASED PUBLIC TRANSPORT MANAGEMENT SYSTEM**”, carried out by **K Shreyas**, bearing USN : **1DA18EC059**, **Keerthi B**, bearing USN : **1DA18EC065**, **Likith Kumar Gowda**, bearing USN : **1DA18EC076**, **Rakesh D**, bearing USN : **1DA18EC105**, bonafide students of Dr. Ambedkar Institute of Technology, Bengaluru – 560056 in partial fulfillment for the award of Bachelor of Engineering in Electronics and Communication Engineering of the Visvesvaraya Technological University, Belagavi during the year 2021–2022. It is certified that all the corrections/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.

  
Signature of the guide  
(Prof. Triveni)

  
Signature of the HOD  
(Dr. Ramesh S.)

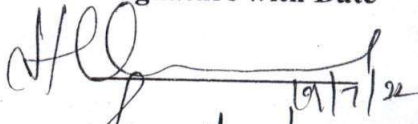
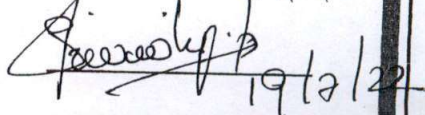
  
Signature of the Principal  
(Dr. Meenakshi M.)

**External Viva**

**Name of the Examiners**

1. Dr. Umadesi H
2. Dr. SRINIDYA P

**Signature with Date**



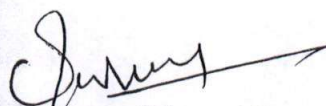
**Dr. AMBEDKAR INSTITUTE OF TECHNOLOGY**  
**Mallathahalli, Bengaluru - 560056**

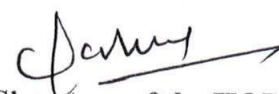
**Department of Electronics & Communication Engineering**




***Certificate***

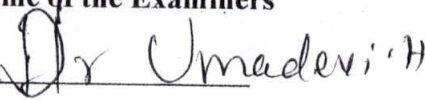
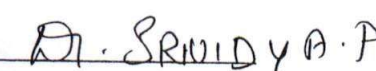
Certified that the project work entitled “**DUAL AXIS SOLAR TRACKER**”, carried out by **KAVITHA G**, bearing USN: 1DA18EC062, **KULAL UTTAM RAJENDRA**, bearing USN:1DA18EC066, **M L VIDHYA**, bearing USN: 1DA18EC077, **PARICHAY KUMAR N**, bearing USN: 1DA18EC094, bonafide students of Dr. Ambedkar Institute of Technology, Bengaluru – 560056 in partial fulfillment for the award of Bachelor of Engineering in Electronics and Communication Engineering of the Visvesvaraya Technological University, Belagavi during the year 2021–2022. It is certified that all the corrections/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.

  
**Signature of the guide**  
**(Dr. Ramesh S.**  
**Professor and HOD,**  
**ECE Dept)**

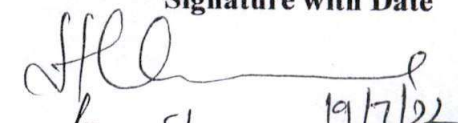
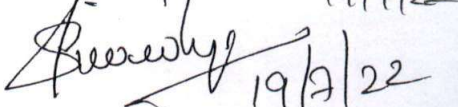
  
**Signature of the HOD**  
**(Dr. Ramesh S.**  
**Professor and HOD,**  
**ECE Dept)**

  
**Signature of the Principal**  
**(Dr. Meenakshi M.)**

**External Viva**  
**Name of the Examiners**

1. 
2. 

**Signature with Date**

 19/7/22  
 19/8/22

**Dr. AMBEDKAR INSTITUTE OF TECHNOLOGY**  
**Mallathahalli, Bengaluru - 560056**

**Department of Electronics & Communication Engineering**



***Certificate***

Certified that the project work entitled “**IOT AND ML BASED FOREST MONITORING AND UNEARTHING SPECIES**”, carried out by **Shobha. K**, bearing USN:1DA18EC126, **Shwetha.S**, bearing USN:1DA18EC130, **Spoorthy.N.V**, bearing USN:1DA18EC134 bonafide students of Dr. Ambedkar Institute of Technology, Bengaluru – 560056 in partial fulfillment for the award of Bachelor of Engineering in Electronics and Communication Engineering of the Visvesvaraya Technological University, Belagavi during the year 2021–2022. It is certified that all the corrections/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.

**Signature of the guide**  
**(Dr. Tanuja P.)**  
Assistant Professor

**Signature of the HOD**  
**(Dr. James S.)**

Dept. of Electronics and Communication Engg.  
Dr. Ambedkar Institute of Technology  
Bengaluru - 560056

**Signature of the Principal**  
**(Dr. Meenakshi M.)**

**External Viva**

**Name of the Examiners**

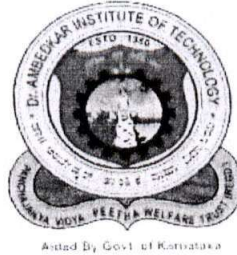
1. Dr. Umadeshi
2. Dr. Sriwidyaa P

**Signature with Date**

# Dr. AMBEDKAR INSTITUTE OF TECHNOLOGY

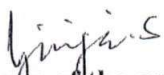
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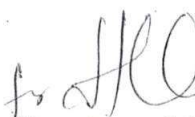
Department of Electronics & Communication Engineering




## Certificate

Certified that the project work entitled "DEVELOPMENT OF COMPUTATIONAL SYSTEM USING QUANTUM COMPUTING", carried out by SHAIKH SHADAB HOSSAIN, bearing USN: 1DA18EC121, SURYA AM, bearing USN:1DA18EC142 and ULLAS C, bearing USN:1DA18EC147, bonafide students of Dr. Ambedkar Institute of Technology, Bengaluru – 560056 in partial fulfillment for the award of Bachelor of Engineering in Electronics and Communication Engineering of the Visvesvaraya Technological University, Belagavi during the year 2021–2022. It is certified that all the corrections/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.

  
Signature of the guide  
(Girija S, Assistant professor)

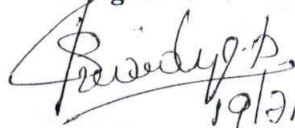
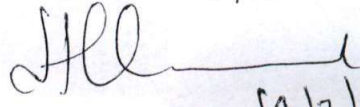
  
Signature of the HOD  
(Dr. Ramesh S.)

  
Signature of the Principal  
(Dr. Meenakshi.M.)

External Viva  
Name of the Examiners

Dept. of Electronics and Communication Engineering  
Dr. Ambedkar Institute of Technology  
Bengaluru - 560056

1. D. S. Ravi Prasad P
2. Dr. Umadevi H

Signature with Date  
  
19/3/2022  
  
19/3/22

# Dr. AMBEDKAR INSTITUTE OF TECHNOLOGY

Mallathahalli, Bengaluru - 560056

Department of Electronics & Communication Engineering



## Certificate

Certified that the project work entitled "ANTI POACHING SYSTEM", carried out by ANMOL V, bearing USN: 1DA18EC017, HEMSURIYA M, bearing USN:1DA18EC053, ROSHAL K M, bearing USN:1DA18EC113 and VAIBHAV S, bearing USN:1DA18EC149, bonafide students of Dr. Ambedkar Institute of Technology, Bengaluru – 560056 in partial fulfillment for the award of Bachelor of Engineering in Electronics and Communication Engineering of the Visvesvaraya Technological University, Belagavi during the year 2021–2022. It is certified that all the corrections/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.

Signature of the guide  
(Shwetha N, Assistant professor)

Signature of the HOD  
(Dr. Ramesh S.)

Signature of the Principal  
(Dr. Meenakshi.M.)

External Viva  
Name of the Examiners

1. \_\_\_\_\_

2. \_\_\_\_\_

Dept. of Electronics and Communicati  
Dr. Ambedkar Institute of Technol  
Bengaluru - 560056

Signature with Date

**Dr. AMBEDKAR INSTITUTE OF TECHNOLOGY**  
**Mallathahalli, Bengaluru - 560056**

**Department of Electronics & Communication Engineering**



***Certificate***

Certified that the project work entitled “Machine learning based text to speech converter for visually impaired”, carried out by Supriya A M, bearing USN: 1DA18EC138, Supriya H, bearing USN: 1DA18EC139, Vedala Dinesh, bearing USN:1DA18EC152, Kavya R, bearing USN: 1DA18EC063 bonafide students of Dr. Ambedkar Institute of Technology, Bengaluru – 560056 in partial fulfillment for the award of Bachelor of Engineering in Electronics and Communication Engineering of the Visvesvaraya Technological University, Belagavi during the year 2021–2022. It is certified that all the corrections/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.

**Signature of the guide**  
**(Vidyashree C)**

**Signature of the HOD**  
**(Dr. Ramesh S.)**

**Signature of the Principal**  
**(Dr. Meenakshi M.)**

***External Viva***  
**Name of the Examiners**

**Signature with Date**

1. \_\_\_\_\_

2. \_\_\_\_\_

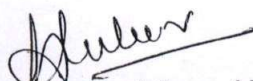
**Dr. AMBEDKAR INSTITUTE OF TECHNOLOGY**  
**Mallathahalli, Bengaluru - 560056**

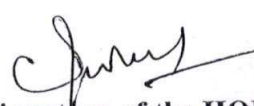
**Department of Electronics & Communication Engineering**

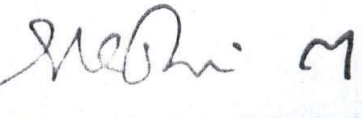


***Certificate***

Certified that the project work entitled “**DESIGN AND IMPLEMENTATION OF SATELLITE TRACKING SYSTEM**”, carried out by **ANUSHREE H K**, bearing USN: 1DA18EC021, **ARCHANA K P**, bearing USN: 1DA18EC022, **BINDU V**, bearing USN: 1DA18EC031, **GRISHMA YADAV N**, bearing USN: 1DA18EC045, bonafide students of Dr. Ambedkar Institute of Technology, Bengaluru – 560056 in partial fulfillment for the award of Bachelor of Engineering in Electronics and Communication Engineering of the Visvesvaraya Technological University, Belagavi during the year 2021–2022. It is certified that all the corrections/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.

  
**Signature of the guide**  
**Mohankumar V**  
**(Assistant Professor)**

  
**Signature of the HOD**  
**Dr. Ramesh S**

  
**Signature of the Principal**  
**Dr. Meenakshi M**

**External Viva**  
**Name of the Examiners**

**Signature with Date**

1. \_\_\_\_\_

2. \_\_\_\_\_


**Dr. AMBEDKAR INSTITUTE OF TECHNOLOGY**  
**Mallathahalli, Bengaluru - 560056**

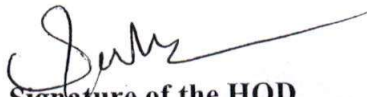
**Department of Electronics & Communication Engineering**



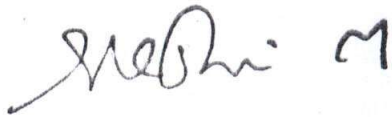
***Certificate***

Certified that the project work entitled "VIRTUAL TELEMEDICINE SYSTEM FOR REMOTE HEALTH MONITORING USING MACHINE LEARNING", carried out by Vineetha V, bearing USN: 1DA18EC158, Yashaswini A, bearing USN: 1DA18EC159, Yashaswini S, bearing USN: 1DA18EC160, bonafide students of Dr. Ambedkar Institute of Technology, Bengaluru – 560056 in partial fulfillment for the award of Bachelor of Engineering in Electronics and Communication Engineering of the Visvesvaraya Technological University, Belagavi during the year 2021–2022. It is certified that all the corrections/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.

  
**Signature of the guide**  
**(Mrs. Mala Sinnoor,**  
**Assistant Professor)**

  
**Signature of the HOD**  
**(Dr. Rajesh S)**

Dept. of Electronics and Communication Engg.  
Dr. Ambedkar Institute of Technology  
Bengaluru - 560056

  
**Signature of the Principal**  
**(Dr. Meenakshi M)**

**External Viva**  
**Name of the Examiners**

1. \_\_\_\_\_

2. \_\_\_\_\_

**Signature with Date**

**Dr. AMBEDKAR INSTITUTE OF TECHNOLOGY**  
**Mallathahalli, Bengaluru - 560056**

**Department of Electronics & Communication Engineering**



***Certificate***

Certified that the project work entitled "Sign Language to Speech Conversion for Speech Impaired", carried out by Jamiksha rani G, bearing USN: 1DA19EC412, Lavanya N, bearing USN:1DA19EC417, Navya Shree, bearing USN:1DA19EC419, Nethra TN, bearing USN:1DA19EC420, bonafide students of Dr. Ambedkar Institute of Technology, Bengaluru – 560056 in partial fulfillment for the award of Bachelor of Engineering in Electronics and Communication Engineering of the Visvesvaraya Technological University, Belagavi during the year 2021–2022. It is certified that all the corrections/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.

*Jahan*  
*13/12/22*  
**Signature of the guide**  
(Prof Sajidha Thabassum B.)

*Ramesh S.*  
**Signature of the HOD**  
(Dr. Ramesh S.)  
HOD

*Meenakshi M.*  
**Signature of the Principal**  
(Dr. Meenakshi M.)

Dept. of Electronics and Communication E.  
Dr. Ambedkar Institute of Technology  
Bengaluru - 560056

**External Viva**  
**Name of the Examiners**

**Signature with Date**

1. \_\_\_\_\_

2. \_\_\_\_\_



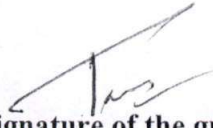
**Dr. AMBEDKAR INSTITUTE OF TECHNOLOGY**  
Mallathahalli, Bengaluru - 560056

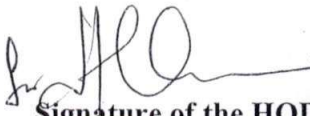
**Department of Electronics & Communication Engineering**

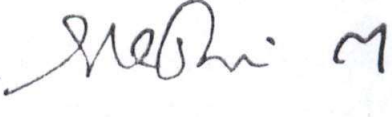


***Certificate***

Certified that the project work entitled **POTHOLE DETECTION AND CRASH AVOIDANCE**, carried out by **KAVITA**, bearing USN:1DA18EC061, **LAKSHMI SAI T**, bearing USN:1DA18EC070, **LEELAVATHI N V**, bearing USN:1DA18EC074, **PALLAVI B A**, bearing USN:1DA18EC093, bonafide students of Dr. Ambedkar Institute of Technology, Bengaluru – 560056 in partial fulfillment for the award of Bachelor of Engineering in Electronics and Communication Engineering of the Visvesvaraya Technological University, Belagavi during the year 2021–2022. It is certified that all the corrections/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.

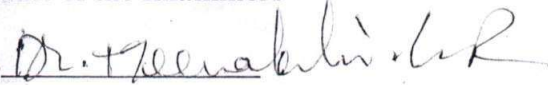
  
Signature of the guide  
(Dr. Tanuja Patgar,  
Assistant Professor)

  
Signature of the HOD  
(Dr. Ramesh S.)  
HOD

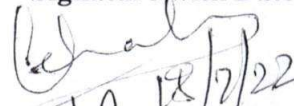
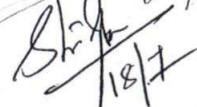
  
Signature of the Principal  
(Dr. Meenakshi M.)

Dept. of Electronics and Communication Engg  
Dr. Ambedkar Institute of Technology  
Bengaluru - 560056

**External Viva**  
Name of the Examiners

1.   
Dr. Meenakshi M.
2. SHILPA D.R

Signature with Date

  
18/2/22  
  
18/2

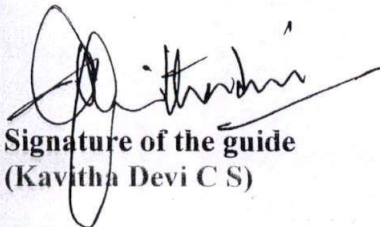
**Dr. AMBEDKAR INSTITUTE OF TECHNOLOGY**  
**Mallathahalli, Bengaluru - 560056**

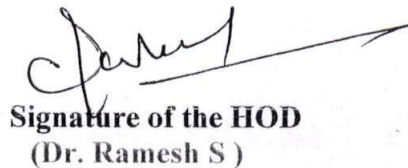
**Department of Electronics & Communication Engineering**

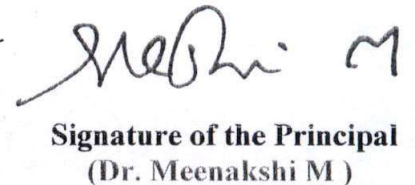


***Certificate***

Certified that the project work entitled “ARTIFICIALLY INTELLIGENT AUTONOMOUS ROBOT”, carried out by **ADITHYA LOKANATH** bearing USN 1DA18EC002, **AKSHAY MUTTAPPA MANG** bearing USN 1DA18EC009, **ANISH V** bearing USN 1DA18EC013, **GURUPRASAD K S** bearing USN 1DA18EC046, bonafide students of Dr. Ambedkar Institute of Technology, Bengaluru – 560056 in partial fulfillment for the award of Bachelor of Engineering in Electronics and Communication Engineering of the Visvesvaraya Technological University, Belagavi during the year 2020–2021. It is certified that all the corrections/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.

  
Signature of the guide  
(Kavitha Devi C S)

  
Signature of the HOD  
(Dr. Ramesh S)

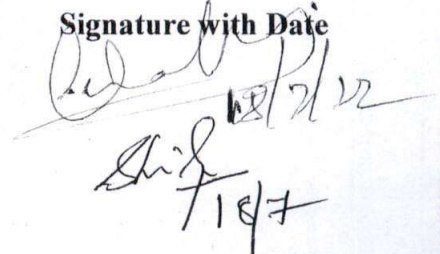
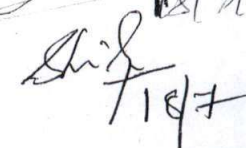
  
Signature of the Principal  
(Dr. Meenakshi M)

**External Viva**

**Name of the Examiners**

1. Dr. Meenakshi M
2. SHILPA P.R

**Signature with Date**

  
18/7/22  
  
18/7

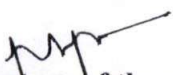
**Dr. AMBEDKAR INSTITUTE OF TECHNOLOGY**  
**Mallathahalli, Bengaluru - 560056**

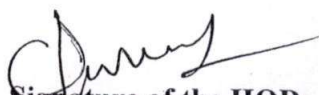
**Department of Electronics & Communication Engineering**

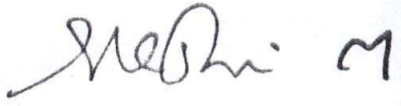


***Certificate***

Certified that the project work entitled “**DESIGNING OF PSEUDO RANDOM BIT GENERATOR FOR TEXT ENCRYPTION**”, carried out by **JAMALUDDIN HAMZAH ALI**, bearing USN: 1DA18EC055, **MRUNAL SINGH V**, bearing USN: 1DA18EC082, **NANDINI DEY**, bearing USN: 1DA18EC086, **PRIYANKA**, bearing USN: 1DA18EC102, bonafide students of Dr. Ambedkar Institute of Technology, Bengaluru – 560056 in partial fulfillment for the award of Bachelor of Engineering in Electronics and Communication Engineering of the Visvesvaraya Technological University, Belagavi during the year 2021–2022. It is certified that all the corrections/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.

  
**Signature of the guide**  
**G S Pushpalatha**  
(Assistant Professor)

  
**Signature of the HOD**  
**Dr. Ramesh S**

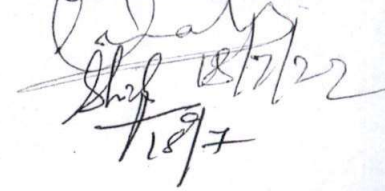
  
**Signature of the Principal**  
**Dr. Meenakshi M**

**External Viva**

**Name of the Examiners**

1. Dr. Meenakshi M
2. Shruthi D

**Signature with Date**

  
18/7/22

**Dr. AMBEDKAR INSTITUTE OF TECHNOLOGY**  
**Mallathahalli, Bengaluru - 560056**

**Department of Electronics & Communication Engineering**



***Certificate***

Certified that the project work entitled "MACHINE VISION FOR BEARING ORIENTATION DETECTION", carried out by PUNITHA S N, bearing USN: 1DA19EC424, RAJATH R NAVALGI, bearing USN:1DA19EC428, RAKSHA A, bearing USN:1DA19EC429, VIJAY KUMAR N, bearing USN:1DA19EC436 bonafide students of Dr. Ambedkar Institute of Technology, Bengaluru – 560056 in partial fulfillment for the award of Bachelor of Engineering in Electronics and Communication Engineering of the Visvesvaraya Technological University, Belagavi during the year 2020–2021. It is certified that all the corrections/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.

**Signature of the guide**  
(Mala Sinnoor, Asst.Prof)

**Signature of the HOD**  
(Dr. Ramesh S. )  
HOD

**Signature of the Principal**  
(Dr. Meenakshi M.)

Dept. of Electronics and Communication Engineering  
Dr. Ambedkar Institute of Technology  
Bengaluru - 560056

**External Viva**  
**Name of the Examiners**

1. \_\_\_\_\_

2. \_\_\_\_\_

**Signature with Date**


**Dr. AMBEDKAR INSTITUTE OF TECHNOLOGY**  
Mallathahalli, Bengaluru - 560056

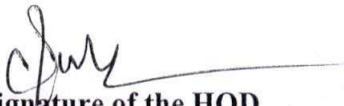
**Department of Electronics & Communication Engineering**

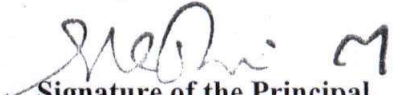


## *Certificate*

Certified that the project work entitled “**WOMEN’S SAFETY APP IN MOBILE APLICATION**”, carried out by **BHAVYA V**, bearing USN: 1DA19EC403, **BHUMIKA K Y**, bearing USN: 1DA19EC404, **SOWMYA B A**, bearing USN: 1DA19EC435, **VIJAYALAKSHMI P**, bearing USN: 1DA19EC437, bonafide students of Dr. Ambedkar Institute of Technology, Bengaluru – 560056 in partial fulfillment for the award of Bachelor of Engineering in Electronics and Communication Engineering of the Visvesvaraya Technological University, Belagavi during the year 2021–2022. It is certified that all the corrections/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.

  
Signature of the guide  
Dr. Shivaputra  
(Assistant Professor)

  
Signature of the HOD  
Dr. Ramesh S

  
Signature of the Principal  
Dr. Meenakshi M

*External Viva*  
Name of the Examiners

Dept. of Electronics and Communication Engg.,  
Dr. Ambedkar Institute of Technology  
Bengaluru - 560056

Signature with Date

1. \_\_\_\_\_

2. \_\_\_\_\_

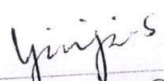
**DR. AMBEDKAR INSTITUTE OF TECHNOLOGY**  
Mallathahalli, Bengaluru - 560056

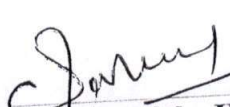
**Department of Electronics & Communication Engineering**




**Certificate**

Certified that the project work entitled "SOIL MACRO-NUTRIENTS DETECTION, CROP AND FERTILIZER RECOMMENDATION WITH IRRIGATION SYSTEM", carried out by **DIKSHITH G**, bearing USN: 1DA18EC040, **ISHITHA N**, bearing USN:1DA18EC054, bonafide students of Dr. Ambedkar Institute of Technology, Bengaluru - 560056 in partial fulfillment for the award of Bachelor of Engineering in Electronics and Communication Engineering of the Visvesvaraya Technological University, Belagavi during the year 2021-2022. It is certified that all the corrections/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.

  
Signature of the Guide  
Girija S  
Assistant Professor

  
Signature of the HOD  
Dr. Ramesh S  
Prof. and Head

  
Signature of the Principal  
Dr. Meenakshi M  
Prof. and Principal

**External Viva**  
Name of the Examiners

1. \_\_\_\_\_

2. \_\_\_\_\_

Signature with Date

**Dr. AMBEDKAR INSTITUTE OF TECHNOLOGY**  
**Mallathahalli, Bengaluru - 560056**


**Department of Electronics & Communication Engineering**




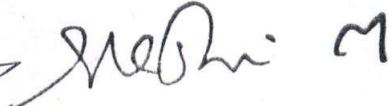
***Certificate***

Certified that the project work entitled "Railway Register and Track Safety Monitoring System", carried out by Sachin Ramachandra Achari, bearing USN: 1DA19EC433, Sachin Subrahmanya Shet, bearing USN:1DA19EC434, Vinay Kumar H S, bearing USN:1DA19EC438, Vinod, bearing USN:1DA19EC439, bonafide students of Dr. Ambedkar Institute of Technology, Bengaluru – 560056 in partial fulfillment for the award of Bachelor of Engineering in Electronics and Communication Engineering of the Visvesvaraya Technological University, Belagavi during the year 2021–2022

. It is certified that all the corrections/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.

  
Signature of the guide  
(Mrs. Hemalatha K N)

  
Signature of the HOD  
(Dr. Ramesh S.)

  
Signature of the Principal  
(Dr. Meenakshi M.)

HOD  
Dept. of Electronics and Communication Engg.  
Dr. Ambedkar Institute of Technology  
Bengaluru - 560056

**External Viva**  
**Name of the Examiners**

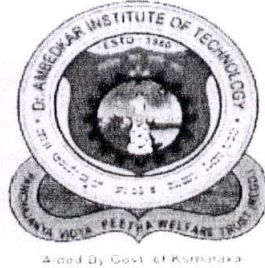
**Signature with Date**

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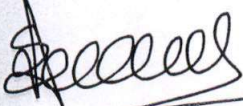
**Dr. AMBEDKAR INSTITUTE OF TECHNOLOGY**  
**Mallathahalli, Bengaluru - 560056**

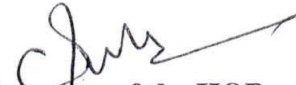
**Department of Electronics & Communication Engineering**




***Certificate***

Certified that the project work entitled “**IOT BASED INFORMATIVE SYSTEM FOR EXAMINATION CENTER**”, carried out by **Akhilesh Bagalkot**, bearing USN: **1DA18EC007**, **Arvind Kumar**, bearing USN: **1DA18EC023**, **B E Raja**, bearing USN: **1DA18EC025**, **Prasad Goled**, bearing USN: **1DA18EC098**, bonafide students of Dr. Ambedkar Institute of Technology, Bengaluru – 560056 in partial fulfillment for the award of Bachelor of Engineering in Electronics and Communication Engineering of the Visvesvaraya Technological University, Belagavi during the year 2021–2022. It is certified that all the corrections/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.

*For*  
  
Signature of the guide  
(Prof. Sangeetha N)

  
Signature of the HOD  
(Dr. Ramesh S.)

  
Signature of the Principal  
(Dr. Meenakshi M.)

HOD

Dept. of Electronics and Communication Engg.,  
Dr. Ambedkar Institute of Technology  
Bengaluru - 560056

**External Viva**

**Name of the Examiners**

**Signature with Date**

1. \_\_\_\_\_

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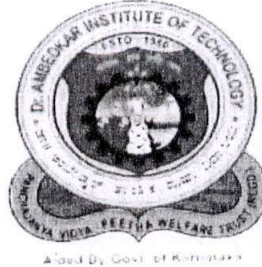
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**Dr. AMBEDKAR INSTITUTE OF TECHNOLOGY**  
**Mallathahalli, Bengaluru - 560056**

**Department of Electronics & Communication Engineering**



***Certificate***

Certified that the project work entitled “**CLASSIFICATION OF RAILWAY TRACK DEFECTS BASED ON COMPUTER VISION USING DNN**”, carried out by **ANITHA G S**, bearing USN:1DA18EC014, **BHAVANA S J**, bearing USN: 1DA18EC028, **JAYASHREE A M**, bearing USN:1DA18EC057, bonafided students of Dr. Ambedkar Institute of Technology, Bengaluru – 560056 in partial fulfillment for the award of Bachelor of Engineering in Electronics and Communication Engineering of the Visvesvaraya Technological University, Belagavi during the year 2021–2022. It is certified that all the corrections/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.

*Spoorthi P A*  
Signature of the guide  
(Spoorthi P A,  
Assistant Professor)

*Ramesh S*  
Signature of the HOD  
(Dr. Ramesh S.)

*Meenakshi M*  
Signature of the Principal  
(Dr. Meenakshi M.)

Dept. of Electronics and Communication Engg.,  
Dr. Ambedkar Institute of Technology

**External Viva**  
**Name of the Examiners**

**Signature with Date**

1. \_\_\_\_\_

2. \_\_\_\_\_

# Dr. AMBEDKAR INSTITUTE OF TECHNOLOGY

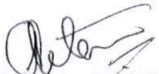
Mallathahalli, Bengaluru - 560056


Department of Electronics & Communication Engineering

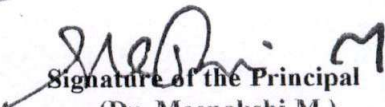


## Certificate

Certified that the project work entitled “**Leaf Disease Detection In Cocos Nucifera Using Image Processing**”, carried out by Bhoomika S, bearing USN: 1DA18EC030, Chethan M C, bearing USN: 1DA18EC035, Geetha D C, bearing USN: 1DA18EC044, Prem P Chulaki, bearing USN: 1DA18EC100 bonafide students of Dr. Ambedkar Institute of Technology, Bengaluru – 560056 in partial fulfillment for the award of Bachelor of Engineering in Electronics and Communication Engineering of the Visvesvaraya Technological University, Belagavi during the year 2021–2022. It is certified that all the corrections/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.

  
Signature of the guide  
(Dr. Chetan S, Asst. Prof)

  
Signature of the HOD  
(Dr. Ramesh S. )

  
Signature of the Principal  
(Dr. Meenakshi M.)

*External Viva*  
Name of the Examiners

Signature with Date

1. \_\_\_\_\_

2. \_\_\_\_\_

# Dr. AMBEDKAR INSTITUTE OF TECHNOLOGY

Mallathahalli, Bengaluru - 560056

Department of Electronics & Communication Engineering



## Certificate

Certified that the project work entitled "EMERGENCY COST EFFECTIVE PORTABLE VENTILATOR WITH LIVE TRACKING", carried out by **Hiraman**, bearing USN: 1DA19EC410, **Nuthan Kumar**, bearing USN:1DA19EC421, **Pramoda H V**, bearing USN: 1DA19EC422, **Radhika R**, bearing USN: 1DA19EC426, bonafide students of Dr. Ambedkar Institute of Technology, Bengaluru – 560056 in partial fulfilment for the award of Bachelor of Engineering in Electronics and Communication Engineering of the Visvesvaraya Technological University, Belagavi during the year 2021-2022. It is certified that all the corrections/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.

Signature of the guide

(Kesthara V)  
Assistant Professor

Signature of the HOD

(Dr. Ramesh S)  
HOD  
Dept. of Electronics and Communication  
Dr. Ambedkar Institute of Technology  
Bengaluru - 560056

Signature of the Principal

(Dr. Meenakshi M)

External Viva

Name of the Examiners

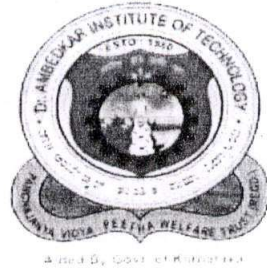
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Signature with Date

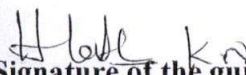
**Dr. AMBEDKAR INSTITUTE OF TECHNOLOGY**  
**Mallathahalli, Bengaluru - 560056**

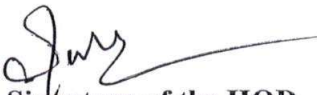
**Department of Electronics & Communication Engineering**




**Certificate**

Certified that the project work entitled “**SOLAR POWERED WHEEL CHAIR WITH VOICE CONTROLLER AND GESTURE CONTROLLER**”, carried out by **AASHRITHEST H G**, bearing USN: 1DA19EC400, **DEEPAK S**, bearing USN:1DA19EC408, **KIRAN S L**, bearing USN:1DA19EC413, **LIKITHA H T**, bearing USN:1DA19EC418 bonafide students of Dr. Ambedkar Institute of Technology, Bengaluru – 560056 in partial fulfillment for the award of Bachelor of Engineering in Electronics and Communication Engineering of the Visvesvaraya Technological University, Belagavi during the year 2021–2022. It is certified that all the corrections/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.

  
Signature of the guide  
Mrs. Hemalatha K N  
(Assistant Professor)

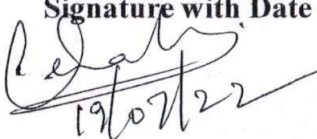
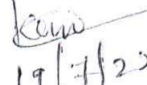
  
Signature of the HOD  
Dr. Ramesh S  
HOD

  
Signature of the Principal  
Dr. Meenakshi M

Dept. of Electronics and Communication Engg.  
Dr. Ambedkar Institute of Technology  
Bengaluru - 560056

**External Viva**  
**Name of the Examiners**

1. Dr. Meenakshi M
2. Dr. Saraswathi K

Signature with Date  
  
19/07/22  
  
19/7/22

# Dr. AMBEDKAR INSTITUTE OF TECHNOLOGY


Mallathahalli, Bengaluru - 560056

Department of Electronics & Communication Engineering

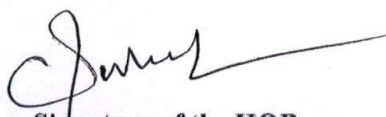


## Certificate

Certified that the project work entitled "SMART WHEELCHAIR FOR DISABLED PERSON'S", carried out by Akhila M, bearing USN: 1DA18EC006, Chandana K C, bearing USN:1DA18EC034, Kirankumar, bearing USN: 1DA19EC414, Ranjitha T V, bearing USN: 1DA19EC430, bonafide students of Dr. Ambedkar Institute of Technology, Bengaluru – 560056 in partial fulfilment for the award of Bachelor of Engineering in Electronics and Communication Engineering of the Visvesvaraya Technological University, Belagavi during the year 2021-2022. It is certified that all the corrections/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.

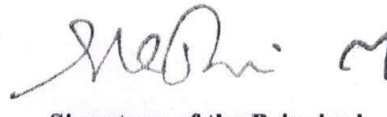
  
Signature of the guide

(Dr. J S Baligar)  
Associate Professor

  
Signature of the HOD

(Dr. Ramesh S)

Dept. of Electronics and Communication Engg.  
Dr. Ambedkar Institute of Technology  
Bengaluru - 560056

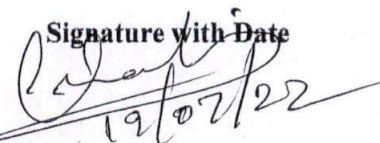
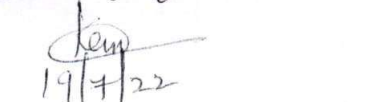
  
Signature of the Principal

(Dr. Meenakshi M)

### External Viva

Name of the Examiners

1. Dr. Meenakshi M
2. Dr. Suresh Kumar

Signature with Date  
  
19/07/22  
  
19/7/22

**Dr. AMBEDKAR INSTITUTE OF TECHNOLOGY**  
**Mallathahalli, Bengaluru - 560056**

**Department of Electronics & Communication Engineering**



***Certificate***

Certified that the project work entitled "Pot-Hole Detection and Clearance Robot", carried out by **DEVAYYA**, bearing USN: 1DA18EC038, **H. LALLAWMAWMA**, bearing USN: 1DA18EC047, **HARSHA KG**, bearing USN: 1DA18EC049, **SURAJ P**, bearing USN: 1DA18EC446, bonafide students of Dr. Ambedkar Institute of Technology, Bengaluru - 560056 in partial fulfillment for the award of Bachelor of Engineering in Electronics and Communication Engineering of the Visvesvaraya Technological University, Belagavi during the year 2021-2022. It is certified that all the corrections/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.

**Signature of the guide**  
**Ripal Patel**  
**Assistant Professor**

**Signature of the HOD**  
**Dr. Ramesh S.**  
**Professor & HOD**

**Signature of the Principal**  
**Dr. Meenakshi M.**

**External Viva**  
**Name of the Examiners**

Dept. of Electronics and Communication Engg.  
Dr. Ambedkar Institute of Technology  
Bengaluru - 560056

**Signature with Date**

1. \_\_\_\_\_

\_\_\_\_\_

2. \_\_\_\_\_

\_\_\_\_\_

**Dr. AMBEDKAR INSTITUTE OF TECHNOLOGY**  
**Mallathahalli, Bengaluru - 560056**

**Department of Electronics & Communication Engineering**



***Certificate***

Certified that the project work entitled "SIMULATION OF BASTION HOST USING TERRAFORM AND MACHINE LEARNING", carried out by A AKSHAYA, bearing USN: 1DA18EC001, AMULYA M B, bearing USN:1DA18EC011, HARSHITHA M D, bearing USN:1DA18EC051, JEEVITHA K, bearing USN:1DA18EC058, bonafide students of Dr. Ambedkar Institute of Technology, Bengaluru – 560056 in partial fulfillment for the award of Bachelor of Engineering in Electronics and Communication Engineering of the Visvesvaraya Technological University, Belagavi during the year 2021–2022. It is certified that all the corrections/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.

*18-7-2022*  
Signature of the guide  
(Siddesha K)  
(Assistant Professor)

*[Signature]*  
Signature of the HOD  
(Dr. Ramesh S)

*[Signature]*  
Signature of the Principal  
(Dr. Meenakshi M)

**External Viva**

**Name of the Examiners**

1. Dr. Meenakshi M . L.R.
2. Dr. Sasubhalki K

**Signature with Date**

*[Signature]*  
19/7/22  
*[Signature]*  
19/7/22

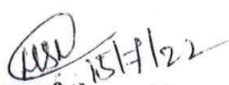
**Dr. AMBEDKAR INSTITUTE OF TECHNOLOGY**  
**Mallathahalli, Bengaluru - 560056**


**Department of Electronics & Communication Engineering**

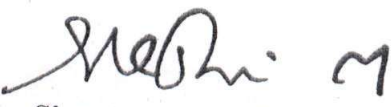


***Certificate***

Certified that the project work entitled “FPGA Implementation of Advance Hamming Codes to detect and correct single bit errors in CAN Protocol”, carried out by Anusha Bhuvana R Hebbar, bearing USN: 1DA18EC019, Divya Yadav N E, bearing USN:1DA18EC041, G D Akshay Kumar, bearing USN:1DA18EC043, bonafide students of Dr. Ambedkar Institute of Technology, Bengaluru – 560056 in partial fulfillment for the award of Bachelor of Engineering in Electronics and Communication Engineering of the Visvesvaraya Technological University, Belagavi during the year 2021–2022. It is certified that all the corrections/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.

  
Signature of the guide  
(H S Nagarathna.)  
(Assistant Professor)

  
Signature of the HOD  
(Dr. Ramesh S.)

  
Signature of the Principal  
(Dr. Meenakshi M.)

**External Viva**  
**Name of the Examiners**

**Signature with Date**

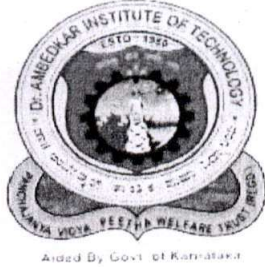
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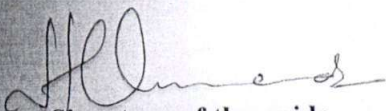
**Dr. AMBEDKAR INSTITUTE OF TECHNOLOGY**  
**Mallathahalli, Bengaluru - 560056**


**Department of Electronics & Communication Engineering**

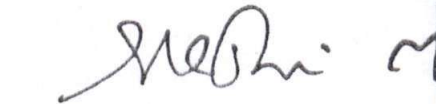


## *Certificate*

Certified that the project work entitled “*Prediction And Analysis Of Water Requirements In Automated Irrigation System Using Ann And Lora Technology*”, carried out by Rahul B N, bearing USN:1DA18EC104, Rathin Gowda K G, bearing USN:1DA18EC110, Kishor C, bearing USN:1DA19EC415, Rohit, bearing USN:1DA19EC431, bonafide students of Dr. Ambedkar Institute of Technology, Bengaluru – 560056 in partial fulfillment for the award of Bachelor of Engineering in Electronics and Communication Engineering of the Visvesvaraya Technological University, Belagavi during the year 2020–2021. It is certified that all the corrections/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.

  
Signature of the guide  
(Dr. Umadevi H.)  
Professor

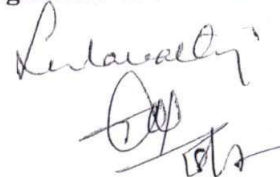
  
Signature of the HOD  
(Dr. Ramesh S.)

  
Signature of the Principal  
(Dr. Meenakshi M.)

*External Viva*  
Name of the Examiners

1. Dr. Leelavathi
2. Ranjitha Devi

Signature with Date

  
15/12

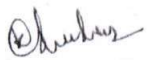
**Dr. AMBEDKAR INSTITUTE OF TECHNOLOGY**  
**Mallathahalli, Bengaluru - 560056**

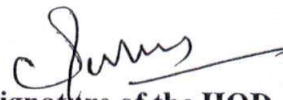
**Department of Electronics & Communication Engineering**

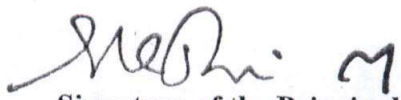


***Certificate***

Certified that the project work entitled “MILITIA SIXTH SENSE”, carried out by **Manjunatha Gowda N**, bearing USN : **1DA18EC078**, **Prateek P D** , bearing USN : **1DA18EC099**, **Pritam Sarkar** , bearing USN : **1DA18EC101** , **Rakshithgowda K M** , bearing USN : **1DA18EC108**, bonafide students of Dr. Ambedkar Institute of Technology, Bengaluru – 560056 in partial fulfillment for the award of Bachelor of Engineering in Electronics and Communication Engineering of the Visvesvaraya Technological University, Belagavi during the year 2021–2022. It is certified that all the corrections/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.

  
**Signature of the guide**  
**Prof Kavya S**

  
**Signature of the HOD**  
**Dr. Ramesh S**

  
**Signature of the Principal**  
**Dr. Meenakshi M**

***External Viva***  
**Name of the Examiners**

1. \_\_\_\_\_

2. \_\_\_\_\_

**Signature with Date**

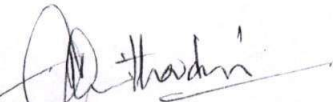
\_\_\_\_\_


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## Certificate

Certified that the project work entitled "Object Detection", carried out by Bhargav D R, bearing USN: 1DA18EC027, Bhavya S, bearing USN: 1DA18EC029, bonafide students of Dr. Ambedkar Institute of Technology, Bengaluru - 560056 in partial fulfillment for the award of Bachelor of Engineering in Electronics and Communication Engineering of the Visvesvaraya Technological University, Belagavi during the year 2020-2021. It is certified that all the corrections/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.

  
Signature of the Guide  
(Kayitha Devi C S),  
Assistant Professor

  
Signature of the HOD  
(Dr. Ramesh S.)

  
Signature of the Principal  
(Dr. Meenakshi M.)

HOD  
Dept. of Electronics and Communication Engg  
Dr. Ambedkar Institute of Technology  
Bengaluru - 560056

External Viva  
Name of the Examiners

1. \_\_\_\_\_

2. \_\_\_\_\_

Signature with Date


**Dr. AMBEDKAR INSTITUTE OF TECHNOLOGY**  
**Mallathahalli, Bengaluru - 560056**

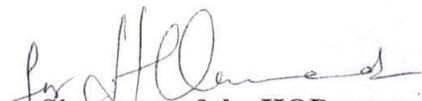
**Department of Electronics & Communication Engineering**




***Certificate***

Certified that the project work entitled “**DESIGN AND DEVELOPMENT OF ELECTRIC VEHICLE**”, carried out by KEERTHANA N bearing USN : 1DA18EC064, MOHNISH S bearing USN : 1DA18EC081, NAGARJUN BM bearing USN : 1DA18EC085, RAMYA BS bearing USN : 1DA18EC109, bonafide students of Dr. Ambedkar Institute of Technology, Bengaluru – 560056 in partial fulfillment for the award of Bachelor of Engineering in Electronics and Communication Engineering of the Visvesvaraya Technological University, Belagavi during the year 2020–2021. It is certified that all the corrections/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.

  
**Signature of the guide**  
(Prof Harsha.R)

  
**Signature of the HOD**  
(Dr. Ramesh S.)  
HOD

  
**Signature of the Principal**  
(Dr. Meenakshi M.)

Dept. of Electronics and Communication En  
Dr. Ambedkar Institute of Technology  
Bengaluru - 560056

***External Viva***

**Name of the Examiners**

1. Dr. Leelavalli G

2. Kanitha Desai

**Signature with Date**

Leelavalli G

Kanitha Desai

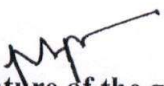
**Dr. AMBEDKAR INSTITUTE OF TECHNOLOGY**  
**Mallathahalli, Bengaluru - 560056**

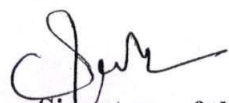
**Department of Electronics & Communication Engineering**




***Certificate***

Certified that the project work entitled “**UNDERWATER COMMUNICATION SYSTEM USING LI-FI TECHNOLOGY**”, carried out by **Pushpa P**, bearing USN:IDA18EC103, **Rakshith S**, bearing USN:IDA18EC107, **Sagar M S**, bearing USN:IDA18EC115, **Santhosh H M**, bearing USN:IDA18EC118, bonafide students of Dr. Ambedkar Institute of Technology, Bengaluru – 560056 in partial fulfillment for the award of Bachelor of Engineering in Electronics and Communication Engineering of the Visvesvaraya Technological University, Belagavi during the year 2021–2022. It is certified that all the corrections/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.

  
**Signature of the guide**  
**(Pushpalatha G S)**  
Assistant Professor



  
**Signature of the HOD**  
**(Dr. Ramesh S)**

  
**Signature of the Principal**  
**(Dr. Meenakshi M)**

**External Viva**  
**Name of the Examiners**

1. Dr. Leelavathi S
2. Ranitha Devi CS

**Signature with Date**

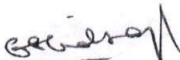
**Dr. AMBEDKAR INSTITUTE OF TECHNOLOGY**  
**Mallathahalli, Bengaluru - 560056**

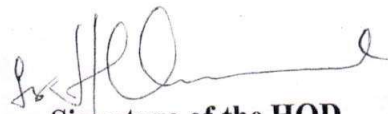
**Department of Electronics & Communication Engineering**

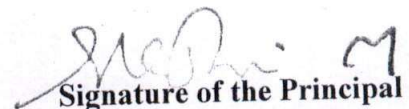


***Certificate***

Certified that the project work entitled “**IOT BASED SMART COLD STORAGE FOR EFFICIENT STOCK MANAGEMENT**”, carried out by **BINDHU K G**, bearing USN: 1DA19EC405, **DEEPA**, bearing USN: 1DA19EC407, **JACQUILINE S**, bearing USN: 1DA19EC411, **ROZA R**, bearing USN: 1DA19EC432, bonafide students of Dr. Ambedkar Institute of Technology, Bengaluru – 560056 in partial fulfillment for the award of Bachelor of Engineering in Electronics and Communication Engineering of the Visvesvaraya Technological University, Belagavi during the year 2021–2022. It is certified that all the corrections/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.

  
**Signature of the guide**  
**Dr. Shivaputra**  
**(Assistant Professor)**

  
**Signature of the HOD**  
**Dr. Ramesh S**  
**HOD**

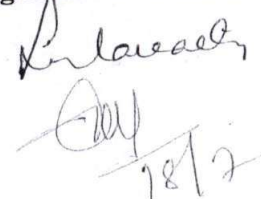
  
**Signature of the Principal**  
**Dr. Meenakshi M**

Dept. of Electronics and Communication Engg  
Dr. Ambedkar Institute of Technology  
Bengaluru - 560056

**External Viva**  
**Name of the Examiners**

1. Dr. Kelavalli G
2. Manitha Puris

**Signature with Date**

  
18/12

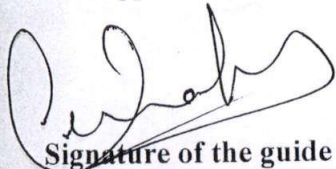
**Dr. AMBEDKAR INSTITUTE OF TECHNOLOGY**  
**Mallathahalli, Bengaluru - 560056**

**Department of Electronics & Communication Engineering**

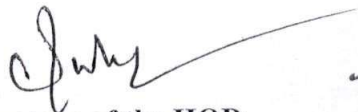


***Certificate***

Certified that the project work entitled “**Design of Microstrip patch Antenna Array for 5G wireless communication applications**”, carried out by **Vikas B S**, bearing USN: 1DA18EC155, **Vinay Kumar G S**, bearing USN: 1DA18EC156, and **Vinay R**, bearing USN:1DA18EC157 bonafide students of Dr. Ambedkar Institute of Technology, Bengaluru – 560056 in partial fulfillment for the award of Bachelor of Engineering in Electronics and Communication Engineering of the Visvesvaraya Technological University, Belagavi during the year 2021–2022. It is certified that all the corrections/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.

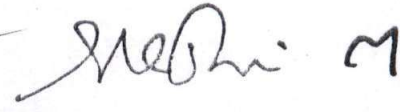


**Signature of the guide**  
**(Dr. Meenakshi L Rathod**  
**Assistant Professor)**



**Signature of the HOD**  
**(Dr. Ramesh S.)**

Dept. of Electronics and Communication Engg  
Dr. Ambedkar Institute of Technology  
Bengaluru - 560056

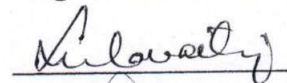
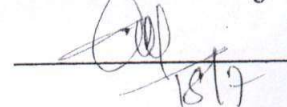


**Signature of the Principal**  
**(Dr. Meenakshi M.)**

**External Viva**  
**Name of the Examiners**

1. Dr. Leelavathi
2. Karitha Devi

**Signature with Date**

  
  
18/7

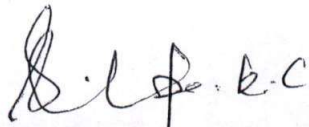
**Dr. AMBEDKAR INSTITUTE OF TECHNOLOGY**  
**Mallathahalli, Bengaluru - 560056**


**Department of Electronics & Communication Engineering**

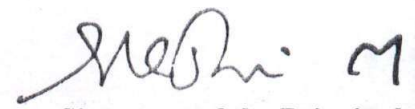


***Certificate***

Certified that the project work entitled “**REAL-TIME WOMEN SECURITY SYSTEM USING IOT**”, carried out by **SACHIN K**, bearing USN: 1DA18EC114, **SANKETH G Y**, bearing USN: 1DA18EC117, **SURESH T R**, bearing USN: 1DA18EC141, **YUVARAJ M K**, bearing USN: 1DA18EC163, bonafide students of **Dr. Ambedkar Institute of Technology, Bengaluru – 560056** in partial fulfillment for the award of Bachelor of Engineering in Electronics and Communication Engineering of the Visvesvaraya Technological University, Belagavi during the year 2021–2022. It is certified that all the corrections/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.

  
Signature of the guide  
**Dr. Shilpa K C**  
(Assistant Professor)

  
Signature of the HOD  
**Dr. Ramesh S**  
HOD

  
Signature of the Principal  
**Dr. Meenakshi M**

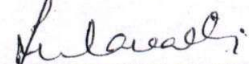
**External Viva**  
Name of the Examiners

1. Dr. Leelaiah G

2. Kenneth Dennis

Dept. of Electronics and Communicatio.  
Dr. Ambedkar Institute of Technology  
Bengaluru - 560056

Signature with Date

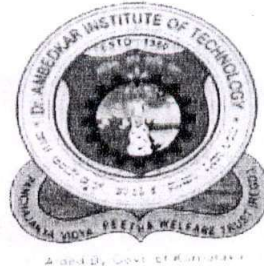







**Dr. AMBEDKAR INSTITUTE OF TECHNOLOGY**  
**Mallathahalli, Bengaluru - 560056**

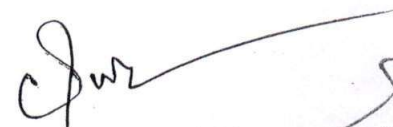
**Department of Electronics & Communication Engineering**

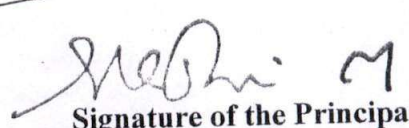


***Certificate***

Certified that the project work entitled “SMART ACCIDENT RESCUE SYSTEM”, carried out by **KURUBA ABHISHEK**, bearing USN: 1DA18EC068, **LALRAMKINLOVA**, bearing USN:1DA18EC073, **MANI N R** bearing USN: 1DA18EC084, **PERAM VENKATA CHAITANYA REDDY**, bearing USN: 1DA18EC096, bonafide students of Dr. Ambedkar Institute of Technology, Bengaluru – 560056 in partial fulfillment for the award of Bachelor of Engineering in Electronics and Communication Engineering of the Visvesvaraya Technological University, Belagavi during the year 2021–2022. It is certified that all the corrections/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.

  
Signature of the guide  
(Sajidha Thabassum)  
(Assistant Professor)

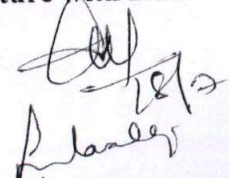
  
Signature of the HOD  
(Dr. Ramesh S.)

  
Signature of the Principal  
(Dr. Meenakshi M.)

**External Viva**  
**Name of the Examiners**

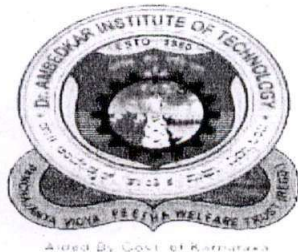
1. Kanitha Perin
2. Dr. Leelavathi

**Signature with Date**

  
28/12  
Ramesh S.

# DR. AMBEDKAR INSTITUTE OF TECHNOLOGY

(An Autonomous Institute Affiliated to VTU, Belagavi, Accredited by NAAC with A Grade)  
Near Jnana Bharathi Campus, Bengaluru – 560056

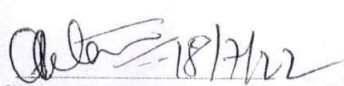


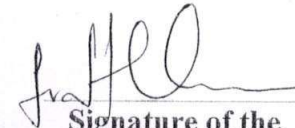
DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

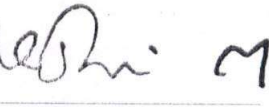
## CERTIFICATE

Certified that the project work entitled “AI BASED SOIL TESTING AND SMART VOICE ASSISTANCE FOR AGRICULTURE” carried out by Ms. Saritha G bearing USN 1DA18EC119, Ms. Shayana bearing USN 1DA18EC125 and Ms. Yashodha S T, bearing USN 1DA18EC161 a bonafide students of Dr. Ambedkar Institute of Technology, Bengaluru-560056 in partial fulfillment for the award of Bachelor of Engineering in Electronics and Communication Engineering of Dr. Ambedkar Institute of Technology during the year 2021-22. It is certified that all the corrections/suggestions indicated during the Internal Assessment have been incorporated in the report deposited in the department.

The project report has been approved as it satisfies the academic requirements in respect of the major project work prescribed for the said degree.

  
Signature of the guide  
Dr. Chetan S  
Assistant Professor  
Dept of ECE

  
Signature of the  
HOD  
Dr. Harish S  
Prof. and Head  
Dept. of Electronics and Communication Engg.,  
Dr. Ambedkar Institute of Technology  
Bengaluru - 560056  
VIVA-VOCE

  
Signature of the  
Principal  
Dr. M Meenakshi

Name of the Examiners

1. B-S Sudha
2. NAHAMANI.K

Signature with Date

Sudha B.S  
19/7/2022  
Ny  
19/7/2022

**Dr. AMBEDKAR INSTITUTE OF TECHNOLOGY**  
**Mallathahalli, Bengaluru - 560056**

**Department of Electronics & Communication Engineering**



***Certificate***

Certified that the project work entitled “**COAL MINE SAFETY MONITORING AND ALERTING SYSTEM**”, carried out by **AKASH R**, bearing USN: 1DA18EC003, **H R VARUNKUMAR**, bearing USN:1DA18EC048, **KARTHIK BHAT Y**, bearing USN: 1DA18EC060, **PRAJWAL R**, bearing USN: 1DA18EC165, bonafide students of Dr. Ambedkar Institute of Technology, Bengaluru – 560056 in partial fulfillment for the award of Bachelor of Engineering in Electronics and Communication Engineering of the Visvesvaraya Technological University, Belagavi during the year 2021–2022. It is certified that all the corrections/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.

**Signature of the guide**  
**(Dr. Meenakshi L Rathod)**  
**(Assistant Professor)**

**Signature of the HOD**  
**(Dr. Ramesh S.)**

**Signature of the Principal**  
**(Dr. Meenakshi M.)**

**External Viva**  
**Name of the Examiners**

1. R. S. Sreedhar
2. NAGAMANI, K

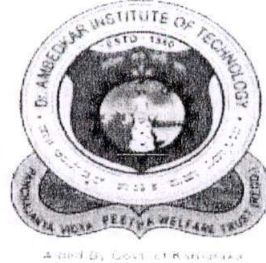
**Signature with Date**

Sreedhar, BS  
19/7/2022

Nag 19/7/2022

**Dr. AMBEDKAR INSTITUTE OF TECHNOLOGY**  
**Mallathahalli, Bengaluru - 560056**

**Department of Electronics & Communication Engineering**



***Certificate***

Certified that the project work entitled “**ADVANCED WHEELCHAIR DESIGN FOR PARALYSED PATIENTS USING MEMS AND MACHINE LEARNING**”, carried out by **LIKHITH D**, bearing USN: 1DA18EC075, **MANOHAR V**, bearing USN:1DA18EC079, **NAVEEN S**, bearing USN: 1DA18EC088, **NIRANJAN KUMAR R**, bearing USN: 1DA18EC091, bonafide students of Dr. Ambedkar Institute of Technology, Bengaluru – 560056 in partial fulfillment for the award of Bachelor of Engineering in Electronics and Communication Engineering of the Visvesvaraya Technological University, Belagavi during the year 2021–2022. It is certified that all the corrections/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.

*S. Nithyashree*  
**Signature of the guide**  
(Nithyashree S)  
(Assistant Professor)

*Ramesh S*  
**Signature of the HOD**  
(Dr. Ramesh S)

*Meenakshi M*  
**Signature of the Principal**  
(Dr. Meenakshi M)

**External Viva**  
**Name of the Examiners**

1. R - S - Sudha

2. NAHAMANI, K

**Signature with Date**

Sudha B S  
19/7/2022

N  
19/7/2022

**Dr. AMBEDKAR INSTITUTE OF TECHNOLOGY**

**Mallathahalli, Bengaluru - 560056**

**Department of Electronics & Communication Engineering**

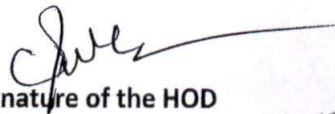


***Certificate***

Certified that the project work entitled "BIOMETRIC BASED SMART ATM", carried out by Ambika V S , bearing USN: 1DA19EC402, Divyashree K, bearing USN:1DA19EC409, Kowsalya H T, bearing USN: 1DA19EC416, Raghavendra Naik , bearing USN: 1DA19EC427, bonafide students of Dr. Ambedkar Institute of Technology, Bengaluru – 560056 in partial fulfilment for the award of Bachelor of Engineering in Electronics and Communication Engineering of the Visvesvaraya Technological University, Belagavi during the year 2021-2022. It is certified that all the corrections/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.

  
**Signature of the guide**

(Mr.SUJAY S.N)  
Assistant Professor

  
**Signature of the HOD**

(Dr. Ramesh S)

  
**Signature of the Principal**

(Dr. Meenakshi M)

Dept. of Electronics and Communication  
Dr. Ambedkar Institute of Technology  
Bengaluru - 560056

**External Viva**

**Name of the Examiners**

1. \_\_\_\_\_

2. \_\_\_\_\_

**Signature with Date**


**Dr. AMBEDKAR INSTITUTE OF TECHNOLOGY**  
Mallathahalli, Bengaluru - 560056

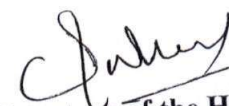
**Department of Electronics & Communication Engineering**

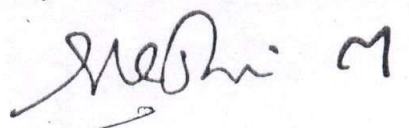


**Certificate**

Certified that the project work entitled "Digital FM Demodulator for SATCOM Applications", carried out by Akshay Bhat M, bearing USN: 1DA18EC008, Akshay V Naik, bearing USN: 1DA18EC010, Darshan K, bearing USN: 1DA18EC037, Edwin R, bearing USN: 1DA18EC042, bonafide students of Dr. Ambedkar Institute of Technology, Bengaluru - 560056 in partial fulfillment for the award of Bachelor of Engineering in Electronics and Communication Engineering of the Visvesvaraya Technological University, Belagavi during the year 2020-2021. It is certified that all the corrections/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.

  
**Signature of the Guide**  
(Shwetha M, Assistant Professor)

  
**Signature of the HOD**  
(Dr. Ramesh S.)

  
**Signature of the Principal**  
(Dr. Meenakshi M.)

**External Viva**  
**Name of the Examiners**

1. \_\_\_\_\_

2. \_\_\_\_\_

**Signature with Date**