1.3.2: Number of courses that include experiential learning through project work/field work/internship during last year

Dept: B.E. Electronics and Communication Engineering **Academic Year-2023-2024**

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1.3.2: Number of courses that include experiential learning through project work/field work/internship during last year

Dept: B.E. Electronics and Communication Engineering **Academic Year-2023-2024**

Sl.No.	Name of the Course	Course Code	Program Code	Program Offering	Project Work	Field Work	Internship
1	Communicative English	HS8151	106	B.E. Electronics and Communication Engineering	✓	✓	
2	Engineering Mathematics -1	MA8151	106	B.E. Electronics and Communication Engineering	✓		
3	Engineering Mathematics - II	MA8251	106	B.E. Electronics and Communication Engineering	✓		
4	Basic Electrical and Instrumentation Engineering	BE8254	106	B.E. Electronics and Communication Engineering	✓	✓	
5	Circuit Analysis	EC8251	106	B.E. Electronics and Communication Engineering	✓		
6	Electronic Devices	EC8252	106	B.E. Electronics and Communication Engineering	✓		✓
7	Fundamentals of Data Structures In C	EC8393	106	B.E. Electronics and Communication Engineering			✓
8	Electronic Circuits-1	EC8351	106	B.E. Electronics and Communication Engineering	✓	✓	
9	Signals and Systems	EC8352	106	B.E. Electronics and Communication Engineering	✓		
10	Digital Electronics	EC8392	106	B.E. Electronics and Communication Engineering	✓		✓

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11	Control Systems Engineering	EC8391	106	B.E. Electronics and Communication Engineering	✓		
12	Electronic Circuits II	EC8452	106	B.E. Electronics and Communication Engineering	✓	✓	
13	Communication Theory	EC8491	106	B.E. Electronics and Communication Engineering	✓	✓	
14	Electromagnetic Fields	EC8451	106	B.E. Electronics and Communication Engineering	✓	✓	
15	Digital Communication	EC8501	106	B.E. Electronics and Communication Engineering	✓	✓	
16	Discrete-Time Signal Processing	EC8553	106	B.E. Electronics and Communication Engineering	✓		
17	Computer Architecture and Organization	EC8552	106	B.E. Electronics and Communication Engineering	✓		
18	Communication Networks	EC8551	106	B.E. Electronics and Communication Engineering	✓	✓	
19	Total Quality Management	GE8077	106	B.E. Electronics and Communication Engineering	✓	✓	✓
20	Microprocessors and Microcontrollers	EC8691	106	B.E. Electronics and Communication Engineering	✓		
21	Wireless Communication	EC8652	106	B.E. Electronics and Communication Engineering	✓	✓	✓
22	Principles of Management	MG8591	106	B.E. Electronics and Communication Engineering		✓	
23	Transmission Lines and RF Systems	EC8651	106	B.E. Electronics and Communication Engineering	✓	✓	✓
24	Wireless Networks	EC8004	106	B.E. Electronics and Communication Engineering	✓	✓	
25	Antennas and Microwave	EC8701	106	B.E. Electronics and Communication Engineering	✓	✓	

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	Engineering						
26	Embedded and Real Time Systems	EC8791	106	B.E. Electronics and Communication Engineering	✓		✓
27	Ad hoc and Wireless Sensor Networks	EC8702	106	B.E. Electronics and Communication Engineering	✓		✓
28	Advanced Wireless Communication	EC8092	106	B.E. Electronics and Communication Engineering	✓	✓	

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AUTOMATIC STREET LIGHT CONTROL SYSTEM AND FAULT DETECTION USING IOT

A PROJECT REPORT

Submitted by

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13/5/24

INTERNAL EXAMINER

13/5/24

EXTERNAL EXAMINER

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ABSTRACT

The IoT (Internet of Things) is a blooming technology that mainly concentrates on the interconnection of devices to one another and the people. The world is getting smarter these days, and people are drawn to the word "Smart". Given that India is one of the world's fastest-growing tech markets, we are incorporating a smart framework into the switch. The project's goal is to provide automatic control and fault detection for street light. The lights are switched ON/OFF automatically based on the intensity of sunlight using the LDR sensor. Automation helps to solve a variety of challenges in both the global economy and everyday life. The power supply which is supplied to the system is converted via Relay before supplying to the street lights. Here the system check's fault in the street light and also sends the alert message to the authorized mobile number through the GSM module. An object's motion is detected using an infrared sensor. According to the program, if there is any object comes near the IR sensor, the light will glow as bright. Otherwise, the light will glow as dim.

CHAPTER 9

CONCLUSION AND FUTURE ENHANCEMENT

9.1 CONCLUSION

In conclusion, the implementation of automatic street light control systems with fault detection using IoT represents a significant advancement in urban infrastructure management. By leveraging IoT technologies, these systems offer a comprehensive solution for enhancing the efficiency, reliability, and safety of street lighting in urban environments.

Through the integration of sensors, micro-controllers, communication modules, and actuators, automatic street light control systems can dynamically adjust lighting levels based on environmental conditions, traffic patterns, and time of day. This capability not only optimizes energy usage and reduces light pollution but also improves visibility and safety for pedestrians and motorists.

Moreover, the incorporation of fault detection mechanisms allows for proactive monitoring of the street light infrastructure, enabling early detection and resolution of issues such as lamp failures, wiring faults, or power supply disruptions. By promptly identifying and addressing these issues, automatic street light control systems minimize downtime, reduce maintenance costs, and ensure the continued reliability of the lighting infrastructure.Furthermore, the remote monitoring and control capabilities enabled by IoT technologies provide administrators with real-time insights into the status and performance of the street light system. This remote access allows for proactive management,

troubleshooting, and optimization of the system, even from off-site locations, enhancing operational efficiency and responsiveness.Overall, automatic street light control systems with fault detection using IoT offer a smart and sustainable solution for urban lighting management. By combining advanced control algorithms, IoT connectivity, and fault detection mechanisms, these systems contribute to creating safer, more energy-efficient, and resilient urban environments for residents and communities alike. As cities continue to embrace smart technologies, the adoption of automatic street light control systems with fault detection using IoT is poised to play a crucial role in shaping the cities of the future.

9.2 FUTURE ENHANCEMENT

Advanced Sensor Technologies:

- Integration of AI-enabled cameras for enhanced traffic monitoring and security surveillance.
- Use of environmental sensors for measuring air quality and noise levels

Robotic Maintenance and Autonomous Systems:

- Deployment of robotic maintenance units with AI and computer vision capabilities.
- Integration of autonomous vehicles for street light maintenance tasks

5G and Low-Latency Connectivity:

- Leveraging 5G for high-speed, low-latency communication between IoT devices and the control system.
- Vehicle-to-infrastructure communication for enhanced traffic management and safety.

WIRELESS CHARGING FR ELECTRIC VEHICLES POWERED BY SOLAR PANEL

A PROJECT REPORT

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ABSTRACT

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

CHAPTER – 8

CONCLUSION AND FUTURE ENHANCEMENT

8.1 CONCLUSION

Electric cars (EVs) are essential in the present when the environment has worsened so significantly. The government of plans to completely phase out diesel cars by the year 2030. Because waiting for an electric vehicle to charge is the biggest drawback to EV adoption, dynamic charging technology and charging stations are essential to the widespread acceptance of EVs. A renewable energy system is at the heart of the "solar-based wireless EV charging" initiative. This saved power is used to refuel EVs.

8.2 FUTURE ENHANCEMENT

This can be improved to be intuitive to the customers, for example to reduce the time in charging station and good parking alignment. Future wireless charging systems may support higher power levels, enabling faster charging times and reducing the overall time required to replenish an EV's battery and increased overall charging efficiency.

AN ACCIDENT PREVENTION ZEBRA CROSSING

A PROJECT REPORT

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ABSTRACT

This report addresses the safety concerns associated with pedestrian crossings in urban areas, where heavy road traffic poses a threat to pedestrians. The primary objective is to reduce accidents occurring at these crossings, specifically caused by drivers disregarding traffic signals. The prevalent issue leading to pedestrian collisions is the unethical behavior of drivers who ignore signals, contributing to unsafe road crossings. To mitigate these risks, the proposed solution involves implementing automatic barriers for zebra crossings. These barriers would automatically elevate to facilitate pedestrian crossing and lower during vehicle traffic, creating a physical barrier to enhance safety. One effective approach to improving safety at pedestrian crossings is the incorporation of traffic signalization. By implementing signalized crossings, pedestrians are provided designated time intervals during signal phases, minimizing conflicts with vehicular traffic. This not only enhances pedestrian safety but also streamlines the flow of both pedestrians and vehicles. Furthermore, the research aims to explore additional measures and technologies that can complement the proposed automatic barriers and signalization. By combining these elements, the study seeks to create a holistic framework for pedestrian safety at crossings in urban environments, addressing both behavioral aspects of drivers and implementing technological innovations to ensure a secure and efficient system for pedestrians to traverse roadways safety. To overcome the difficulties of physically challenged people while zebra crossing by using conveyor for faster movement and safety concerns.

CHAPTER 8

CONCLUSION AND FUTURE ENHANCEMENT

8.1 CONCLUSION

The pedestrian safety ensured by implementing our concept. To avoid unethical behaviour of the driver who ignores the signal will be avoided by implementing the barriers. To overcome the difficulties of physically challenged people while zebra crossing by using conveyor for faster movement and safety concerns.

8.2 FUTURE ENHANCEMENT

- Including real-time data analytics and predictive maintenance.
- Investigate integration with smart city infrastructure for real-time communication with traffic management systems.
- Strengthen security measures with additional layers.
- Explore integration with energy management systems to optimize energy consumption.
- Design the system to be scalable for easy integration into fleet management solutions.

SEED SOWING AND SPRAYING AGRICULTURE ROBOT USING APP CONTROL

A PROJECT REPORT

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ABSTRACT

To design the implementation of a prototype robot model, which can be utilized to sow seeds in agricultural fields are presented. In this design to cover the seeds sowed by the robot with sand, a metal plate is fixed at the rear side of the robot. As the robot moves forward, the rear side plate keeps covering the seeds. To control the valve on the seed tank feed line at a desired rate, DC motor is employed. With the help of the control algorithm developed for the seed sowing robot, seed sowing depth and number of seeds per position can be altered as per the need of the user. This robot can manage to plant the seeds up to 2–5 cm depth. Bluetooth module attached to the microcontroller unit establishes communication of control signals between the robot and a smart mobile phone. Different tasks of the robot are controlled by an Android application installed on a smart phone. A mechanical device that helps in sowing operation and controlled using Bluetooth has been developed. This project is focused on an agriculture seed sowing and fertilizer spraying process using a android application. The integral construction of the robot is made simple to use. Recently in agriculture, the required manpower is not available as well as the aging farmer and increasing world population are causing a threat to the future. This project focuses on developing the m robot to minimize the working cost and increase the accuracy of seed planting. Agriculture has been the backbone of the Indian economy and it'll still remain so for an extended time. Today the environmental influence of agricultural production is extremely much focused and therefore the demands to the industry are increasing. In the present scenario, most of the cities in India do not have sufficient skilled man power in agricultural sector and that affects the progress of developing country. Therefore, farmers have to use upgraded technology for cultivation activity.

CHAPTER VII

CONCLUSION & FUTURE SCOPES

The project "seed sowing and spraying agriculture robot using app control"is a testament to the power of pre-planning and strategic design. By meticulously laying out our objectives and methodologies in advance, we've crafted a solution that not only addresses the needs of modern agriculture but also offers unprecedented flexibility in its operation.

Through innovative design and thoughtful engineering, we've developed a solution that is not only highly desirable but also incredibly economical. By leveraging the latest advancements in robotics andapp control technology, we've created a system that streamlines the process of seed sowing and spraying in agricultural settings, as well as in homes and other environments..

In conclusion, the "seed sowing and spraying agriculture robot using appcontrol" project represents a triumph of innovation, collaboration, and perseverance. By harnessing the power of technology and strategic planning, we've created a solution that promises to make a meaningful impact in the world of agriculture and beyond.

The future implementation of the "seed sowing and spraying agriculture robot using app control" project could involve several advancements and enhancements to further improve its effectiveness and efficiency. Here are some potential future implementations:

FUTURE SCOPES

- We can develop the robot by adding sensors to check the temperature of the soil, moisture of the soil, etc.
- We can also develop the control gesture of the robot via Artificial intelligence.
- The energy used by the robot can be renewable by charging the battery via solar panels.
- The robot can be developed to operate automatically without human control, just by feeding commands only one.
- Expand the capabilities of the robot to perform multi - tasks like soil cultivation, harvesting and crop monitoring,etc.

SMART GLOVE FOR DEAF AND MUTE PEOPLE

A PROJECT REPORT

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13/5/24

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13/5/24

EXTERNAL EXAMINER

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ABSTRACT

Communication is an important tool to share and express our inner feeling via speech and it is easy for normal people but it is difficult for deaf and mute community. In recent years, technological advancements have provided promising solution to bridge this gap. One such innovation is the development of smart glove tailored specifically for the deaf and mute population. The smart glove incorporates an array of sensor and actuators coupled with sophisticated machine learning algorithms to translate sign language gesture into spoken language or text in real-time. Smart glove includes its ergonomic design for comfort and ease of use, wireless connectivity for versatile application, and adaptive learning capabilities to enhance accuracy and efficiency over time. Through a combination of hardware innovation and software intelligence, the Smart Glove represents a significant advancement in assistive technology, empowering deaf and mute individuals to communicate more effectively and participate fully in social interactions, education, and professional environments society.By providing a portable, intuitive, and efficient means of communication, this project aims to empower deaf and mute individuals to engage more fully in social interactions, education and professional settings,ultimately promoting in accessibility for all.

CHAPTER-9

CONCLUSION AND FUTURE WORK

9.1 CONCLUSION

In conclusion, the development of a smart glove designed specifically for deaf and mute individual holds immense promise in revolutionizing communication accessibility and inclusivity. By harnessing advanced technology such as sensors, machine learning algorithms, and this innovative device has the potential to break down barriers faced by the deaf and mute community in everyday interactions. The ability to translate sign language gestures into text or speech in real-time not only facilitates communication with non-signers but also fosters greater independence and confidence among users. Furthermore, the integration of connectivity options enables seamless integration with other devices, expanding its utility and impact. Ultimately, the smart glove represents a significant step towards creating a more inclusive society where individuals of all abilities can fully participate and engage in various aspects of life without limitation.

Sign language is one of the useful tools to ease the communication between the deaf and mute communities and normal society. Though sign language can be implemented to communicate, the target person must have an idea of the sign language which is not possible always. Hence our project lowers such barriers .The glove is capable of translating their sign language gestures into speech through android phone. Smart glove focuses the translation of gestures of the alphabets. Comparing with other approaches, smart glove uses Principle Component Analysis to classify the real time input data for feature extraction. Disabled use these gloves to convert sign performed by them into speech and text. This paper is a useful tool for speech impaired and partially paralyzed patients which fill the communication gap between patients, doctors and relatives.

AUTOMATED WASTE DISPOSAL SYSTEM WITH METAL DETECTION AND OVERFLOW ALERTS

A PROJECT REPORT

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INTERNAL EXAMINER

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ABSTRACT

The non-metal smart dustbin operates through a sophisticated network of sensors and a servo motor, all controlled by an Arduino Nano. Initially, an inductive proximity sensor is employed to detect the presence of metal objects near the bin. If a metal object is sensed, the servo motor remains closed, indicating that the bin is not yet available for trash disposal. Conversely, when the proximity sensor fails to detect any metal, the servo motor opens, signaling that the bin is accessible. To enhance its functionality, the system incorporates an ultrasonic sensor, which specializes in identifying non-metallic objects nearby. Upon detecting a non-metal object in proximity to the bin, the ultrasonic sensor communicates with the Arduino Nano. Subsequently, the Nano commands the servo motor to open, enabling convenient disposal of non-metal waste. Through the seamless integration of these sensors and motor control mechanisms, the non-metal smart dustbin offers an efficient solution for waste disposal. The Arduino Nano serves as the brain of the system, orchestrating actions based on sensor inputs. This intelligent system not only simplifies the process of trash disposal but also promotes effective segregation of different waste types, thus contributing to environmental sustainability.

CHAPTER-7
CONCLUSION AND FUTURE ENHANCEMENT

7.1CONCLUSION

The system described is a non-metal smart dustbin prototype utilizing an Arduino Nano microcontroller, inductive proximity sensor, servo motor, and ultrasonic sensor. The inductive proximity sensor is designed to detect metal objects within its range, triggering the servo motor to keep the dustbin closed when metal objects are sensed. Conversely, when no metal object is detected, the servo motor opens the dustbin lid. However, to address the limitation of the inductive sensor in detecting non-metal objects, an ultrasonic sensor is incorporated. This sensor identifies objects in close proximity to the dustbin, regardless of their material composition. When a non-metal object is detected, the servo motor opens the dustbin lid accordingly. This integration of sensors and actuators enables the dustbin to automatically respond to the presence of objects, enhancing its functionality and user convenience. Through this setup, the prototype demonstrates a rudimentary yet effective mechanism for a smart dustbin capable of discerning between metal and non-metal objects, providing a glimpse into the potential of automated waste management systems.

7.2 FUTURE ENHANCEMENT

The integration of an inductive proximity sensor, servo motor, and ultrasonic sensor into an Arduino Nano-based smart dustbin represents a significant advancement in waste management technology. While the current implementation effectively sorts and disposes of non-metal waste, there are several avenues for future work and enhancements to further improve the functionality and versatility of the system.

WUSN BASED SOIL DATA COMMUNICATION FOR RESCUE AND HEALTH MONITORING OF TUNNEL AND MINING WORKING PEOPLE

A PROJECT REPORT

Submitted by

ABDUL FATTAH.S	**(812420106001)**
DHINESH BHARATHI.M.K	**(812420106006)**
GUHAN.S	**(812420106304)**
PRAVEEN KUMAR.K	**(812420106313)**

In partial fulfillment for the award of the degree

Of

BACHELOR OF ENGINEERING

IN

ELECTRONICS AND COMMUNICATION ENGINEERING

M.I.E.T. ENGINEERING COLLEGE, TRICHY-07

ANNA UNIVERSITY : CHENNAI 600 025

MAY 2024

PRINCIPAL
M.I.E.T. ENGINEERING COLLEGE
GUNDUR, TIRUCHIRAPALLI - 620 007

ANNA UNIVERSITY: CHENNAI 600 025

BONAFIDE CERTIFICATE

This is to certify that the project report titled "**WUSN BASED SOIL DATA COMMUNICATION FOR RESCUE AND HEALTH MONITORING OF TUNNEL AND MINING WORKING PEOPLE**" is the Bonafide work of **ABDUL FATTAH.S (812420106001), DHINESH BHARATHI.M.K(812420106006), GUHAN.S(812420106304), PRAVEEN KUMAR.K (812420106023)**who carried out the project work under my supervision.

SIGNATURE

Dr.U.SURESH KUMAR, M.E., Ph.D.

HEAD OF THE DEPARTMENT

Department of Electronics and
Communication Engineering,
M.I.E.T. Engineering College,
Tiruchirappalli – 620007.

SIGNATURE

Mrs.P.GAYATHRI, M.E.,

SUPERVISOR
ASSISTANT PROFESSOR

Department of Electronics and
Communication Engineering,
M.I.E.T. Engineering College,
Tiruchirappalli – 620007.

Submitted for the project viva voce held on 13.5.2024

13/5/24
INTERNAL EXAMINER

13/5/24
EXTERNAL EXAMINER

PRINCIPAL
M.I.E.T. ENGINEERING COLLEGE
GUNDUR, TIRUCHIRAPALLI - 620 007

ABSTRACT

The abstract for a Wireless Underground Sensor Network (WUSN) based soil data communication system for rescue and health monitoring of tunnel and mining working people would encapsulate the key components and objectives of the study. It would highlight the innovation, significance, and potential impact of the proposed system.This study presents a novel approach utilizing Wireless Underground Sensor Network (WUSN) technology for real-time soil data communication aimed at enhancing rescue operations and health monitoring for individuals working in tunnel and mining environments. Traditional monitoring systems often face challenges in underground settings due to limited connectivity and accessibility. Leveraging WUSN, our proposed system establishes a robust communication network within the soil, enabling seamless transmission of critical data such as air quality, temperature, and structural integrity. By deploying miniature sensors strategically throughout the underground infrastructure, our system enables continuous monitoring of environmental conditions and physiological parameters of workers. Furthermore, the data collected is relayed to a central control unit on the surface, facilitating prompt response in case of emergencies and ensuring timely intervention for health-related issues. This research contributes to the advancement of underground safety protocols by harnessing cutting-edge WUSN technology, ultimately fostering a safer working environment and enhancing the overall well-being of tunnel and mining workers.

CONCLUSION

In conclusion, the project presents a novel approach to data transmission in underground environments by leveraging transmitter sources. Additionally, the system incorporates GPS tracking functionality to safeguard mineworkers and prevent inadvertent crossing of maritime boundaries.

By enabling the transmission and reception of emergency messages through water in critical situations, the proposed system is poised to enhance the effectiveness and dependability of communication in underground settings.

Through these advancements, the project aims to bolster safety measures and streamline communication protocols for mineworkers, ultimately improving operational efficiency and ensuring their well-being at sea. In conclusion, the development of a WUSN (Wireless Underground Sensor Network) based soil data communication system represents a significant stride towards enhancing safety protocols and improving the well-being of tunneling and mining working people.

By harnessing cutting-edge sensor technology embedded within the soil, this innovative system enables real-time monitoring of critical environmental parameters and worker health indicators.

The integration of sensors such as GPS for location tracking, respiratory sensors for monitoring breathing patterns, heart rate monitors for cardiovascular health assessment, and other relevant sensors creates a comprehensive monitoring network tailored to the unique challenges of underground environments.

This integrated approach not only enhances the ability to detect and respond to emergencies promptly but also enables proactive health management to prevent potential hazards before they escala

ONLINE EXAMINATION SYSTEM FOR VISUALLY CHALLANGED PEOPLE

A PROJECT REPORT

Submitted by

SHARAN S	**(812420106320)**
SARAVANAPRAVEEN P	**(812420106319)**
KOGUL RAJU B	**(812420106009)**
PRINDAVANESHWARAN M	**(812420106014)**

In partial fulfillment for the award of the degree

of

BACHELOR OF ENGINEERING

in

ELECTRONICS AND COMMUNICATION ENGINEERING

M.I.E.T. ENGINEERING COLLEGE, TRICHY

ANNA UNIVERSITY: CHENNAI 600 025

MAY 2024

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ANNA UNIVERSITY - CHENNAI 600 025

BONAFIDE CERTIFICATE

Certified that this project report **"ONLINE EXAMINATION SYSTEM FOR VISUALLY CHALLANGED PEOPLE"** is the bonafide work of **"SHARAN S "(812420106320), "KOGULRAJU B" (812420106009), "SARAVANAPRAVEEN P" (812420106319), "PRINDA VANESH WARAN" (812420106014)**, who carried out the project work under my supervision.

SIGNATURE

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INTERNAL EXAMINER

EXTERNAL EXAMINAR

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ABSTRACT

Voice-based systems allow users access to information on the internet over a voice interface. Prior studies on examination systems that make use of voice interface do not sufficiently exhibit intelligent form of assessment, which diminishes the rigor of examination. The objective of the system is to improve on the achievements of previous studies by providing a framework that will guide the development of a voice-based examination like government exams like TNPSC Group II, Group IV here we develop the project for blind students who all are interested to participate the examination, so that case expert system for the visually impaired students in that means the questions are ready by the language as they selected in the examination portal site. So, the question will be on read mode, the read mode will enhance the speech so that questions will be read and the options will also give in the read mode so they can easily understand the question and options they will answer it manner way. The study employs a combination of technologies such as system design, server-side scripting, voice-based system development, data management and rule-based reasoning in developing the system. The findings show that the voice-based examination system will not only be of immense benefit to the visually impaired students in respective of distance, but will also complement the existing web-based method for online examination.

CHAPTER 8

CONCLUSION AND FUTURE ENHANCEMENT

8.1 CONCLUSION

The proposed system is developed to conduct an Online Examination using voice which will be helpful for people who don't want to use keyboard for interaction with the system. The proposed method will help for voice recognition where we take voice as input through microphone and then register for online examination using the concept of Key generation. The system will analysis the voice based examinations like government exams TNPSC exam, UPSC exam, the online tests will be provided by the voice recognition along with perspective with add subjects and add and view the subjects details, with MP3 and ogg format . The questions and the answers will given like an options. So it will be develop the regular systems with online voice based examination.

8.2 FUTURE ENHANCEMENT

In this paper, an e-examination voice interface for the visually impaired learners in ODL has been provided. The developed system was realized using a framework, system design with pseudocode dialogue sequence and algorithm. A usability evaluation of the system was also conducted. The voice-based examination system would improve the accessibility of examination in distance learning for learners with visual impairment, as well as other able-bodied learners.

ENHANCED HOSPITAL ELECTRIC APPLIANCES CONTROL VIA GESTURE

A PROJECT REPORT

Submitted by

RUTH MARY.S	**(812420106317)**
MEERA.B	**(812420106311)**
PRIYANKA.S	**(812420106314)**
ANUPRIYA.M	**(812420106301)**

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MAY 2024

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BONAFIDE CERTIFICATE

Certified that this project report **"ENHANCED HOSPITAL ELECTRIC APPLIANCES CONTROL VIA GESTURE"** is the bonafide work of "**S.RUTH MARY (812420106317), B.MEERA (812420106311), S.PRIYANKA (812420106314), M.ANUPRIYA (812420106301)**"who carried out the project work under my supervision.

11/05/24

SIGNATURE

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INTERNAL EXAMINER

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ABSTRACT

To address critical hygiene challenges encountered in hospital environments, this project introduces an innovative contactless appliance control system operated via hand gestures. Recognizing the paramount importance of maintaining cleanliness in healthcare settings, the primary objective is to equip healthcare professionals with an efficient, hands-free method to manage various electric appliances. Leveraging cutting-edge technologies such as Node MCU ESP8266 and Gesture sensors, the system allows for the seamless control of multiple appliances through intuitive hand movements. By minimizing the need for physical contact, this innovative solution not only elevates hygiene standards within hospitals but also contributes to fostering a safer and more adaptable healthcare environment. Through the elimination of direct touch interactions, the system offers a novel approach to enhancing cleanliness protocols while simultaneously empowering healthcare workers with greater flexibility and convenience in their daily tasks.

CHAPTER 7

CONCLUSION

The gesture-based control system for hospital electric appliances represents a culmination of cutting-edge technology tailored specifically to the demands of healthcare settings. Its success lies not only in its ability to recognize hand gestures effectively but also in its seamless integration with NodeMCU and OLED display technology, resulting in a user-friendly, hygienic, and highly efficient solution.

What truly sets this system apart is its capacity to provide real-time feedback and facilitate remote access, features that greatly enhance the convenience and safety of healthcare professionals. By eliminating the need for direct physical contact with appliances, the system reduces the risk of contamination, a critical consideration in healthcare environments where infection control is paramount.

Moreover, the system's potential for further refinement holds significant promise. As it continues to evolve, incorporating advancements in gesture recognition technology and interface design, its impact on hospital operations and patient care could be transformative. Imagine a future where healthcare professionals can seamlessly control appliances with intuitive hand gestures, freeing up valuable time and minimizing disruptions in their workflow.

Ultimately, this innovative system has the potential to become a standard feature in modern hospitals, reshaping the way appliance control is approached and setting a new standard for operational efficiency and patient safety. By leveraging the power of gesture-based interaction, it not only streamlines processes but also enhances the overall healthcare experience for both providers and patients, marking a significant step forward in the evolution of hospital technology.

INTELLIGENT EMERGENCY RESPONSE INTEGRATION WITH AUTONOMOUS ASSISTANCE ROBOT FOR HOSPITAL

A PROJECT REPORT

Submitted by

HASAN BASARI A	**(812420106305)**
CHARU AHAMED S	**(812420106302)**
KISHORE KUMAR K	**(812420106309)**
RAGUL S	**(812420106315)**

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MAY 2024

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BONAFIDE CERTIFICATE

Certified that this project report **"INTELLIGENT EMERGENCY RESPONSE INTEGRATION WITH AUTONOMOUS ASSISTANCE ROBOT FOR HOSPITAL"** is the bonafide work of **"A.HASAN BASARI(812420106305), S.CHARU AHAMED(812420106302), K.KISHORE KUMAR(812420106309), S.RAGUL(812420106315)**"who carried out the project work under my supervision.

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Submitted for the Project Viva Voce held on 13/05/2024

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EXTERNAL EXAMINER

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ABSTRACT

Nowadays, the robotics industry is rapidly advancing worldwide. The demand for robots in the medical sector is steadily increasing due to the rise in the number of patients being admitted to hospitals every day. Consequently, there is a shortage of manpower in hospital services compared to the influx of patients, prompting the need for robotic assistance. Various types of robots are now available for use in the medical field. It needs to enhance the efficiency of the autonomous navigation of the robot and Efficient intrahospital logistics play a crucial role in ensuring the timely delivery of medical equipment, tools, and medicine between wards. In this project, we introduce an autonomous medical assistive robot designed for the medical field, aiming to enhance contactless and autonomous navigation in an efficient manner by using ROS2 with nav2 algorithms. Additionally, we designed a smart emergency reaction system that is integrated into the robot. During the carrying process, if the robot causes any power failures or any unexpected events occur, then our emergency system will send an emergency message using GPS and GSM technology that message contains the current coordination of the robot to the hospital authority about the status of the robot. Further, we are adding fingerprint-based storage system, to ensure secure handling of sensitive medical supplies. The integration of these features aims to revolutionize the healthcare sector by improving efficiency, reducing human error, and ensuring timely response to emergencies.

Fig.6.2.1.3 SFLSS APPLICATION

CHAPTER 7

CONCLUSION

The successful implementation of this project exemplifies the transformative potential of robotics technology within healthcare settings, ushering in a new era of efficiency and innovation. By seamlessly integrating advanced hardware components and intelligent software algorithms, our autonomous medical transport robot demonstrates unparalleled capabilities in navigating hospital environments, securing vital medical supplies, and responding promptly to emergencies. This groundbreaking achievement not only streamlines logistical operations but also revolutionizes the way healthcare institutions deliver care and manage resources.

A cornerstone of this project's success lies in the development of a sophisticated fingerprint-based smart storage system, which ensures secure and efficient management of medical supplies. This innovative solution enhances accessibility while maintaining stringent security protocols, contributing to seamless workflow management within hospitals. Moreover, real-time communication capabilities enable swift coordination and response to emergent situations, optimizing patient care and operational efficiency.

Beyond its core functionalities, the project underscores a commitment to maintaining hygiene standards and ensuring patient safety. Through meticulous attention to detail and adherence to best practices, our solution prioritizes infection control and promotes a safe healthcare environment for patients and staff alike.

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DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

15.02.2024

Note: Submitted to the Chairman,

Through Principal,

Respected Sir,

Sub: Requesting Permission to go for Industrial visit to our Third year ECE students –Reg.

It is planned to go for Industrial visit to **Kerala** for 2 days (19.02.2024 & 20.02.2024) for our third year ECE students. The schedule is given below

Industrial visit date	Company name /place
19.02.2024	Kerala Electrical & Allied Engineering Co.Ltd
20.02.2024	Wonderla Holiday Limited - Kochi

No. of Boy students	27
No. of Girl students	3
No. of Male Staff accompanying	1
No. of Female Staff accompanying	1

Kindly grant us permission to go for industrial visit.

Thanking you

Industrial Visit Coordinator
[B.T. KURINJI KA AP/BME]

HOD/ECE

Principal 15/2/24

Chairman 19.2.24

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NBA
NAAC A+

Dr. A. Naveen Sait M.E., Ph.D.
Principal

Date :
16.02.2024

To

Shaji M. Varghese
Managing Director
Kerala Electrical & Allied Engineering Co. Ltd
Kochi – India.

This is to certify that the enclosed list of names is the bonafide student of this institution studying in Third Year Electronics and Communication Engineering of our college. All the 25 students along with 02 staff members will visit your organization.

M.I.E.T. ENGINEERING COLLEGE TRICHY-7

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GUNDUR, TIRUCHIRAPALLI - 620 007.

Encl: Students Name List

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Industrial Visit Feedback form from Industry

Course & Department	B.E & ECE
Sem / Year	VI / III
Date(s) of Visit and Time	19.02.2024 and 10.00 AM.
No. of Students visited	24
Accompanying Staff Members	02
Name & Address of the Company	Kerala Electrical & Allied Engg. co. ltd, Mamala (PO) Kochi-682305.
Feedback about the students	Students are Interactive and obedient.
Technical details about the Company	Manufacturing of Transformer in different range.
Authorized Signatory with Name / Designation and Seal	
Any other comments	-

SMITHA THOMAS
PERSONNEL OFFICER
KERALA ELECTRICAL & ALLIED ENGG. CO LTD.
(A GOVT. OF KERALA UNDERTAKING)
MAMALA P.O., KOCHI - 682 305, KERALA

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Department of Electronics and Communication Engineering

Report on Industrial Visit

S.No.	Particulars	Description
1	Year/Semester	III/VI
2	Place of visit	Kerala
3	Total No. of Days	2
4	Date(s) of visit	19.02.2024 & 20.02.2024
5	Total no of students	24 (21 Boys & 03 Girls)
6	No. of Staffs accompanied	2 (1 Gents & 1 Lady)
5	Name of the Industry1 with address	Kerala Electrical & Allied Engineering. Co.Ltd, (A government of Kerala undertaking) Mamala, Kochi
	Name of the Industry 2 with address	Wonderla Holidays Limited,Kerala
6	Objective of the Industrial visit	To provide students an insight regarding internal working of companies.
7	About the Industry1 with address	A Multi-Product Engineering Company with 50 plus years of experience, now proudly serving an envious client base including Defence, Irrigation and Power Projects. Kerala Electrical & Allied Engineering. Co.Ltd, (A government of Kerala undertaking) Mamala, Kochi
	About the Industry 2 with address	It is previously known as Veega land, is located 15 km from kochi city and is home to 50 plus amusement rides. Wonderla Holidays Limited,Kerala
8	Brief about the Students Observation	Students learned about Distribution Transformers, Corrugation Transformers, Solar Transformers, Amorphous Transformers, Medium Power Transformers, and Special Application of Transformers
9	Outcome of the industrial visit	The primary and secondary winding process of transformer and designed the lamination process for minimizing losses in transformer
10	Feedback about the companies visited	Faculties of both the Industries explained very well about the work carried out in their industries. Students get motivated to work in such environment.
11	**CO, PO and PSO MAPPING**	

PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO 10	PO 11	PO12	PSO 1	PSO 2
H	-	-	-	L	H	L	H	H	-	L	-	H	L

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Department of Electronics and Communication Engineering

Report on Industrial Visit

Company Name : Kerala Electrical & Allied Engineering Co.Ltd,
Mamala, Kochi, Kerala- 682305

Date of visit : 19.02.2024 (Monday)

No. of Students : 24

Year/Semester : III/VI

Objective of visit : During the industrial visit the student able

- To realize the construction of transformer rated 11KV/220V
- To acquire the knowledge of designing bushings in transformer
- To identify the primary and secondary winding process of transformer
- To know about the lamination process for minimizing losses in transformer
- To impart the knowledge of insulating oil in a transformer

About the company: A Multi-Product Engineering Company with 50 plus years of experience and expertise in Engineering Industry mainly transformer manufacturing, and proudly serving an envious client base including Defence, Irrigation and Power Projects, Space Research Organizations, State Electricity Boards, Indian Railways and the General Public both in India and abroad. The Company which is a Public Sector Undertaking fully owned by Govt. of Kerala has four state-of-the-art manufacturing units spread across Kerala and has a pan India presence with its Sales and Service unit in all major metros and selected cities.

Outcome of visit: After the completion of industrial visit, the student able to

- Industrial visit provided student a practical perspective on the world of work.
- It helps students to understand the working methods and employment practices applied at KEL.
- Students are exposed to real working environment and shown how things are done in an organization.
- To explain the role of insulating oil in a transformer.

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DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

Year/Sem: II/IV **Academic Year: 2023-2024(Even)**

INDUSTRIAL VISIT

Students Name List

S.NO	REGISTER NUMBER	NAME OF THE STUDENT
1	812421106001	AHAMED YASEEN S
2	812421106003	AMEEN MOHIDEEN S
3	812421106005	ASARAB ALI A
4	812421106012	MADHUMIDHA M
5	812421106016	MOHAMED NAUFAL J
6	812421106017	MOHAMED SUHAJ B
7	812421106018	MOHAMED THARIK A
8	812421106019	MOHAMED VASIM HUSSAIN K
9	812421106022	PRAGADEESWARAN V
10	812421106023	SANJAY V
11	812421106026	SRIGANTH S
12	812421106028	SUJITH MUNNA S
13	812421106029	SYED ASHIK S
14	812421106030	VIMAL R
15	812421106031	VISHNU VARTHAN S
16	812421106301	AADITHIYA
17	812421106303	DALVIN GNANA RAJA D
18	812421106304	DEVA S
19	812421106305	HARISH.V
20	812421106306	MAHESWARI G

M.I.E.T. ENGINEERING COLLEGE TRICHY-7

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21	812421106307	MANJARI
22	812421106308	MARIMUTHU A
23	812421106309	SHAIK BAREETH M
24	812421106310	SHANMUGA NATHAN S
25	812421106312	VIJAY K

Accompanying Staff Members

S.No	Employee Number	Staff Name	Designation
1.	E121413	Mr. S. Suraj Kumar	Assistant professor
2.	E123404	Mrs. R. Anitha	Assistant professor

Hostel Girls Name List

S.No	Roll Number	Name
1.	E1214010	Madhumidha M
2.	E2224034	Manjari R

IV CO-ORDINATOR
[B.J.KIRTHIKA AP/ECE]

HOD/ECE

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KERALA ELECTRICAL & ALLIED ENGINEERING CO. LTD.
(A GOVERNMENT OF KERALA UNDERTAKING)
MAMALA P.O., KOCHI - 682 305
An ISO 9001-2015 Certified Company

Phone : 0484-2787707, 2787981, 2946120
E-mail : mamala@kel.co.in
CIN : U31200KL 1964 SGC002062
Website : www.kel.co.in

MPA/61/ 7199 /24 **15.02.2024**

The HOD
M.I.E.T. Engineering College,
Trichy.

Respected Sir,

Sub: **Permission for Industrial Visit – Reg.**

Ref: Your Letter Dated 14.02.2024.

With reference to the above permission is granted for 30 Nos. Electronics & Communication Engineering Students & 2 faculty members of your college to visit our Factory at Mamala, Kochi on 19.02.2024 from 9.30 am to 12 am.

You are requested to remit Rs.1,000/- towards visiting fee and GST @ 18% extra (Rs.180/-).

The students may be directed to observe the rules of the Company regarding safety and conduct inside the factory premises.

Photography / Videography is strictly prohibited in company premises.

Thanking you,

Yours faithfully,
For KERALA ELECTRICAL & ALLIED ENGG.CO.LTD,

PERSONNEL OFFICER

PRINCIPAL
M.I.E.T. ENGINEERING COLLEGE
GOLDEN ROCK, TIRUCHIRAPALLI - 620 007

Geo-tagged Photos

Industrial Visit Coordinator
[B.T. KIRTHIKA]

HOD/ECE

Principal

PRINCIPAL
M.I.E.T. ENGINEERING COLLEGE
GUNDUR, TIRUCHIRAPALLI - 620 007

CO AND PO, PSO MAPPING

PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO 10	PO 11	PO 12	PSO1	PSO2
H	-	-	-	L	H	L	H	H	-	L	-	H	L

Geo-tagged Photos

Industrial Visit Coordinator
[B.T. KARTHIKA]

HoD/ECE

Principal

PRINCIPAL
M.I.E.T. ENGINEERING COLLEGE
GUNDUR, TIRUCHIRAPALLI - 620 007

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MPA/61/ 7393 /24

19.02.2024

TO WHOMSOEVER IT MAY CONCERN

This is to certify that a batch of 24 Nos. third year Electronics & Communication Engineering Students & 2 Faculty Members of M.I.E.T Engineering College, Tiruchirapalli, Tamil Nadu have visited Mamala Unit of our Company on 19.02.2024.

PERSONNEL OFFICER

SMITHA THOMAS
PERSONNEL OFFICER
KERALA ELECTRICAL & ALLIED ENGG. CO.LTD.
(A GOVT. OF KERALA UNDERTAKING)
MAMALA P.O., KOCHI - 682 305, KERALA

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TIRUCHIRAPPALLI - 620 007

M.I.E.T. ENGINEERING COLLEGE
(Approved by AICTE, New Delhi, Affiliated to Anna University, Chennai)
UG - CSE, ECE & MECH Programs Accredited by NBA, New Delhi
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Recognized by UGC under section 2(f) & 12(B) of UGC Act, 1956
Trichy - Pudukkottai Road, Tiruchirappalli - 620 007. Phone:0431 2660 301
Web site: www.miet.edu, E-mail:principalmiet@miet.edu, contact@miet.edu

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

20.11.2023

Note:Submitted to the Chairman,

Through Principal,

Respected Sir,

Sub: Requesting Permission to go for Industrial visit to our second year ECE and BME students – Reg.

It is planned to go for Industrial visit to Radio Astronomy Centre, **Ooty** for one day (23.11.2023) for our second year ECE and BME students.The schedule is given below

Industrial visit date	Company name /place
23.11.2023	Radio Astronomy Centre, Ooty.

No. of Boy students	25
No. of Girl students	18
No. of Male Staff accompanying	1
No. of Female Staff accompanying	2

Kindly grant us permission to go for industrial visit.

Thanking you

Industrial Visit Coordinator
B.T. Kiruthika
AP/ECE

HoD/ECE

Principal 20/11/23

Chairman

PRINCIPAL
M.I.E.T. ENGINEERING COLLEGE
GUNDUR, TIRUCHIRAPALLI - 620 007

Radio Astronomy Centre

TATA INSTITUTE OF FUNDAMENTAL RESEARCH
Post Box 8, Udhagamandalam (Ooty) - 643 001, TAMIL NADU, INDIA
Telephone: 0423 - 2244880/888 Fax : 0423 – 2244900
Web: www.rac.ncra.tifr.res.in Email: racvisit@ncra.tifr.res.in

NCRA • TIFR

Ref No :RAC_IV_2k23_11_07 **Dated: 20-11-2023**

To

The HOD,
Department of ECE,
M.I.E.T Engineering College,
Tiruchirappalli – 620 007.

Sub : Free Visit to Radio Astronomy Centre – Permission granted
Ref : Request received on 16/11/2023 by email/post.

Dear Sir / Madam,

With reference to your visit request, we are pleased to accord our permission for visiting this Centre, as detailed below.

No. of Persons Visiting : 40 Students + 3 Staff Members.
Date & Time of Visit : **23/11/2023 (Thursday at 10:30 hrs.)**

****

About the institution*:

The Radio Astronomy Centre (RAC) is purely a research organization engaged in research & training Ph.D students in the field of Radio Astrophysics. The Ooty Radio Telescope (ORT) is located in Muthorai near Ooty, in southern India. It is part of the National Centre for Radio Astrophysics (NCRA) of the Tata Institute of Fundamental Research (TIFR), which is funded by the Government of India through the Department of Atomic Energy.

The Ooty Radio Telescope which is an equatorial mounted cylindrical parabolic antenna of size 530-metre (1,740 ft) long and 30-metre (98 ft) wide. It operates at a frequency of 326.5 MHz with a maximum bandwidth of 15 MHz at the front end. The Ooty Radio telescope has been designed and fabricated with domestic Indian technological resources. The ORT was completed in 1970 and continues to be one of the most sensitive radio telescopes in the world.

Note for the visitors:

The visiting students will be shown a video show on the Ooty Radio Telescope and basics of radio astronomy. They can also visit the telescope site and watch the rotation of the telescope (if possible). ***Saturdays and Sundays are holidays*** for the centre & hence if you plan to visit this centre on Saturdays, Sundays and Govt. holidays, you will be able to watch only the video show.

Staff members are requested to confirm the following, ***bring a letter of permission to enter the campus***, all students wear valid Identity card issued by the College/Organization authorities and ***maintaining the discipline in the campus.***

If you are bringing students for any industrial visit, you may please note that RAC is not a factory. No transport or accommodation will be provided by this centre for the above visit. This visit is offered absolutely **FREE** of Cost.

How to reach?

You can reach our centre from Ooty Bus Stand through Ooty Boat House – J.S.S. Public School – Theetukkal – Melcowhatty village route. Bring your vehicle up to our premises in order to avoid ~1 km walk.

visited on 23/11/2023 at 3.15 PM

RADIO ASTRONOMY CENTER
Tata Institute of Fundamental Research
POST BOX No: 8
OOTACAMUND 643 001

With regards,

P. Praveen SA (C)

**For more details visit our website.*

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GUNDUR, TIRUCHIRAPALLI - 620 007

M.I.E.T. ENGINEERING COLLEGE

Industrial Visit Feedback form from Industry

Course & Department	Electronics & Communication Engg.
Sem / Year	III / II
Date(s) of Visit and Time	23/11/23 at 10:30
No. of Students visited	49
Accompanying Staff Members	03
Name & Address of the Company	Radio Astronomy Center Tata Institutional of fundamental research
Feedback about the students	Students co-operation was very good, while seeing the Company and all the aspects.
Technical details about the Company	The Radio Astronomy Center (RAC) is purely a research organization engaged in research & training Ph.D students in the field of Radio Astrophysics
Authorized Signatory with Name / Designation and Seal	RADIO ASTRONOMY CENTRE Tata Institute of Fundamental Research P. O. Box 8, Ootacamund 643 001.
Any other comments	

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M.I.E.T. ENGINEERING COLLEGE

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Trichy – Pudukkottai Road, Tiruchirappalli – 620 007. Phone:0431-2660 303
Website:www.miet.edu, E-mail:principalengg@miet.edu, contact@miet.edu

Department of Electronics and Communication Engineering

Report on Industrial Visit

S.No.	Particulars	Description
1	Year/Semester	II/III
2	Place of visit	Udhagamandalam, Ooty.
3	Total No. of Days	1
4	Date(s) of visit	23.11.23
5	Total no of students	9 Girls and 27 Boys = 36 Students.
6	No. of Staffs accompanied	3
5	Name of the Industry with address	Radio Astronomy Centre, Udhagamandalam, Ooty.
6	Objective of the Industrial visit	To provide students an insight regarding internal working of Radio Astronomy Centre.
7	About the Industry with address	The Radio Astronomy Centre is about 8 km from Ooty, and 1.5 km from the Muthorai. The Radio Astronomy Centre (RAC) is purely a research organization engaged in research & training Ph.D students in the field of Radio Astrophysics. It operates the Ooty Radio Telescope (ORT), which is an equatorial mounted cylindrical parabolic of size 530 m long and 30 m wide.
8	Brief about the Students Observation	The visiting students were showed a video show on the radio telescope and basics of radio astronomy. They visited the telescope site and watch the rotation of the telescope.
9	Outcome of the industrial visit	Students learned Radio Astrophysics through 20min Video and also know the working of the Parabolic Reflector in Radio Astronomical Centre.
10	Feedback about the companies visited	We hope to get more chances further to have such an informative & wonderful experiences of visiting different industries.
11	**CO, PO and PSO MAPPING**	

PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO 10	PO 11	PO12	PSO 1	PSO 2
H	-	-	-	L	H	L	H	H	-	L	-	H	L

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Website:www.miet.edu, E-mail:principalengg@miet.edu, contact@miet.edu

Department of Electronics and Communication Engineering

Report on Industrial Visit

Company Name : Radio Astronomy Centre, NCRA - TIFR,
Udhagamandalam, (Ooty) -643 001.

Date of visit : 23.11.2023 (Thursday)

No. of Students : 9 Girls and 27 Boys = 36 Students

Year/Semester : II/III

Objective of the visit: During the industrial visit the students were able to learn

- Real-time monitoring of solar origin of space weather.
- Study of magnetic and plasma processes during solar flares and coronal mass ejections (CMEs).
- RFI monitoring for astronomical science, education and outreach.

About the Visit (Student's observation):

- Students learned about ORT, which is a cylindrical parabolic cylinder 530mx30m in size operating at a frequency of 326.5Hz.
- The feed consists of an array of 1056 dipoles. The key feature is digitization and cross-correlation of the signals of every set of 4-dipoles. This converts the ORT into a 264 element interferometer with a field of view of 2 degrees x 27cos(delta) degrees. This upgraded instrument is called the **Ooty Wide Field Array (OWFA).**

Outcome of the visit: After the completion of industrial visit, the student able to

- To understand the construction and working of Ooty Wide Field Array(OWFA) and Ooty Radio Telescope(ORT).
- To know the working of The e-Callisto, which is an international network of Solar Radio Spectrometers. The **Radio Astronomy Centre (NCRA-TIFR)** at (Ooty), maintains two of the spectrometers for observational facility.

CO AND PO, PSO MAPPING

PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO 10	PO 11	PO 12	PSO1	PSO2
H	M	L	-	L	M	L	M	-	H	-	M	H	M

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Department of Electronics and Communication Engineering

Industrial Visit

Year/Sem: II/III **Academic Year: 2023-2024(Odd)**

S.NO	REGISTER NUMBER	NAME OF THE STUDENT
1	812422106001	Aarthi A
2	812422106002	Abdul Ajish N
3	812422106003	Agalya D
4	812422106004	Atchaya T
5	812422106006	Calep Jabez.M
6	812422106007	Chandru M G
7	812422106008	Dharani R
8	812422106009	Faahim M
9	812422106010	Gopinath N
10	812422106011	Gurumoorthi K
11	812422106013	Harish T
12	812422106016	Kailasa Manickam.M
13	812422106017	Karthikeyan.S
14	812422106018	Keerthi Varshan P B
15	812422106019	Kishore Kumar R
16	812422106020	Kishore N
17	812422106023	Manusha S
18	812422106025	Mohamed Aswith A
19	812422106031	Parthiban S
20	812422106032	Ragavan G
21	812422106033	Raheem M
22	812422106037	Semmozhivarman P

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23	812422106038	Sivamanickam M
24	812422106039	Syed Barvees J
25	812422106041	Vaazim Ahamed A
26	812422106042	Venkadesh Prasath S
27	812422106043	Vergin Frankiya K
28	812422106044	Vignesh Kumar L
29	812422106045	Yahya B
30	812422106046	Yogeswari S
31	812422106301	Andrew Xavier J
32	812422106302	Mohamed Ajmal M
33	812422106303	Mouleshwari M
34	812422106304	Prakash Kumar s

Accompanying Staff members Name & Sign:

S.No	Employee Number	Staff Name	Designation
1.	E122423	Mr. N. Dharmaraj	Assistant professor
2.	E123401	Mrs. V. Keerthana	Assistant professor
3.	E123403	Mrs. P. Gayathiri	Assistant professor

IV CO-ORDINATOR

HoD/ECE

Principal
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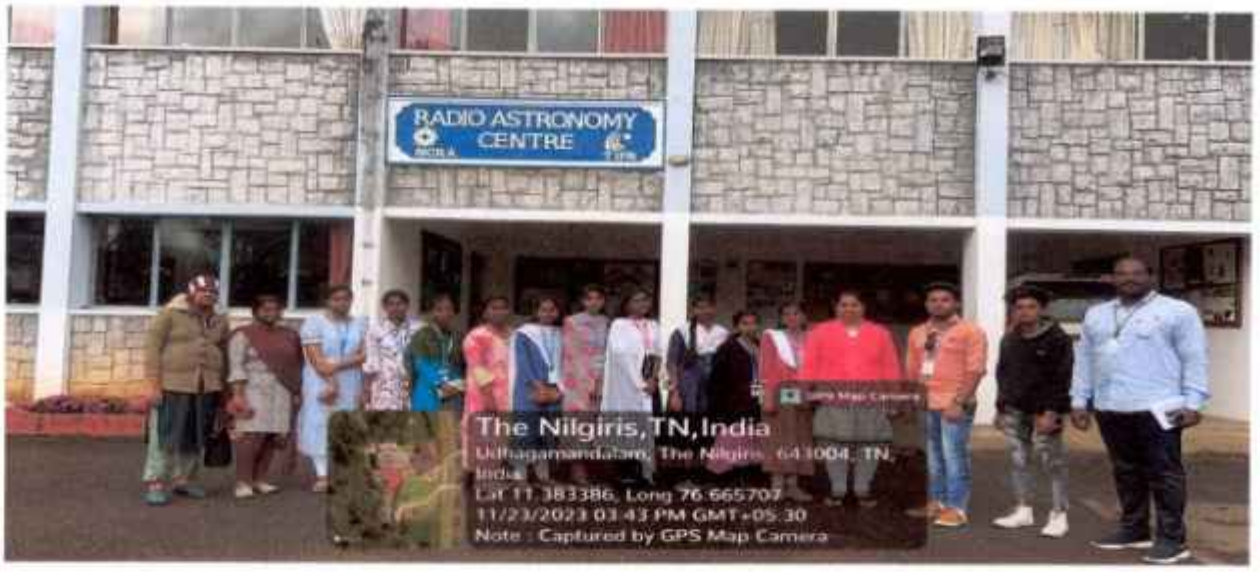

Industrial Visit Coordinator

HoD/ECE

Principal

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Industrial Visit Coordinator **HoD/ECE** **Principal**

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HITAKEY TECH SOLUTION PVT LTD

Under Ministry of Corporate Affairs
U85221TN2023PTC159590

CERTIFICATE

of appreciation

is presented to :

FARZANA BEGUM . M from

ECE / MIET ENGINEERING dept/college

has completed INTERNSHIP on IOT

from 8.7.2023 to 20.7.2023

Best wishes!!

TRAINER HEAD

PRINCIPAL
M.I.E.T. ENGINEERING COLLEGE
GUNDUR, TIRUCHIRAPALLI - 620 007

DIRECTOR

HITAKEY TECH SOLUTION PVT LTD

HITAKEY

Under Ministry of Corporate Affairs

CERTIFICATE

of appreciation

is presented to

ALAGESWARI M from

ECE / M.I.E.T ENGINEERING dept/college

has completed INTERNSHIP on IOT

from 8.7.2023 to 20.7.2023

Best wishes!!

TRAINER HEAD

DIRECTOR

VERIFICATION CODE: GIU8TVR5

EduPrep

Certificate of Completion

This is to certify that Sriganth S

has successfully completed the PYTHON course.

Issued On: 28th June 2023

Geetha Arora, Program Director

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M.I.E.T. ENGINEERING COLLEGE
GUNDUR, TIRUCHIRAPALLI - 620 007

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CERTIFICATE

OF INTERNSHIP

THE FOLLOWING AWARD IS GIVEN TO

MOHAMED AMJATH.S

For his outstanding completion of the compulsory internship program at **EMBEDDED DESIGN.**
From 20.06.2023 To 05.07.2023.

Mentor

Manager

PRINCIPAL
M.I.E.T. ENGINEERING COLLEGE
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THE FOLLOWING AWARD IS GIVEN TO

A.MARIMUTHU

For his outstanding completion of the compulsory internship program at **EMBEDDED DESIGN** .
From 20.06.2023 To 05.07.2023.

Mentor

PRINCIPAL
M.I.E.T. ENGINEERING COLLEGE
GUNDUR, TIRUCHIRAPALLI - 620 007

Manager

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OF INTERNSHIP

THE FOLLOWING AWARD IS GIVEN TO

VIJAY.K

For his outstanding completion of the compulsory internship program at **EMBEDDED DESIGN** .
From 06.07.2023 To 14.07.2023.

Mentor

MCSONICALS PVT. LTD. CBE

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GUNDUR, TIRUCHIRAPALLI - 620 007

Manager

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OF INTERNSHIP

THE FOLLOWING AWARD IS GIVEN TO

SHANMUGANATHAN.S

For his outstanding completion of the compulsory internship program at **EMBEDDED DESIGN** .
From 20.06.2023 To 05.07.2023.

Mentor

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GUNDUR, TIRUCHIRAPALLI - 620 007

Manager

MCSONICALS PRIVATE LIMITED

CERTIFICATE

OF INTERNSHIP

THE FOLLOWING AWARD IS GIVEN TO

H.THOWFIQUE AHAMED

For his outstanding completion of the compulsory internship program at **EMBEDDED DESIGN** .
From 20.06.2023 To 05.07.2023.

Mentor

PRINCIPAL
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Manager

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www.codebindtechnologies.com

04th Jan 2024,
Trichy.

INTERNSHIP CONFIRMATION LETTER

Thrishiya R,
IV-ECE,
M.I.E.T Engineering College,
Trichy.

Dear Student,

In reference to your application we would like to congratulate you on being selected for **Internship** in **CodeBind Technologies** based at **Trichy**. Your training is scheduled from **06.01.2024 to 10.01.2024.** All of us at CodeBind Technologies are excited that you will be joining our team!

As such, your Internship will include training/orientation and focus primarily on learning and developing new skills and gaining a deeper understanding of concepts through hands-on application of the knowledge you learned in class.

Again, congratulations and we look forward to working with you.

Yours sincerely,
Raj Kumar.S
Head, HR Department,
CodeBind Technologies.

info@codebindtechnologies.com
IC, EVR Road, Puthur, Trichy-17.
Branch : Coimbatore, Trichy.

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M.I.E.T. ENGINEERING COLLEGE
GUNDUR, TIRUCHIRAPALLI - 620 007

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www.codebindtechnologies.com

04th Jan 2024,
Trichy.

INTERNSHIP CONFIRMATION LETTER

Sharmila D,
IV-ECE,
M.I.E.T Engineering College,
Trichy.

Dear Student,

In reference to your application we would like to congratulate you on being selected for **Internship** in **CodeBind Technologies** based at **Trichy**. Your training is scheduled from **06.01.2024 to 10.01.2024.** All of us at CodeBind Technologies are excited that you will be joining our team!

As such, your Internship will include training/orientation and focus primarily on learning and developing new skills and gaining a deeper understanding of concepts through hands-on application of the knowledge you learned in class.

Again, congratulations and we look forward to working with you.

Yours sincerely,
Raj Kumar.S
Head, HR Department,
CodeBind Technologies.

info@codebindtechnologies.com

IC, EVR Road, Puthur, Trichy-17.

Branch : Coimbatore, Trichy.

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CERTIFICATE OF INTERNSHIP

CERTIFICATE NUMBER CBTTINE062005240102

This certificate is awarded to **Mr./Ms. THRISHIYA R** for the successful completion of **Internship** in **Embedded Systems** at **CodeBind Technologies, Trichy** from **06th January2024** to **10th January2024.**

During the course of the Internship **Mr./Ms. THRISHIYA R,** exhibited an enthusiastic attitude for learning. In addition to that he/she is quite industrious and dependable.

We are extremely satisfied with the candidate's performance and would like to wish them very success in their future endeavors.

Training Co-Ordinator

Issuing Authority

1C, Sandanam's Tower,
EVR Road, Puthur, Thillai Nagar, Trichy - 17
Landmark : Opposite to Puthur GH.
www.codebindtechnologies.com
99 4040 8010

info@codebindtechnologies.com
+91 99 4040 8010

<codeb!nd/>™ Technologies

CERTIFICATE OF PROJECT COMPLETION

CERTIFICATE NUMBER CBTTINE062005240102

This certificate is awarded to **Mr./Ms. THRISHIYA R**, on the successful completion of the project titled **"Intruder Alarm System Using Arduino IDE with Ultrasonic Sensor"** at **CodeBind Technologies,Trichy** from **06th January2024-10th January2024.**

We found the candidate is highly self-motivated, duty bound and hard working. The performance was above satisfactory and we wish them all the best in their future career.

Training Co-Ordinator

Issuing Authority

PRINCIPAL

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INPLANT TRAINING CERTIFICATE

CERTIFICATE NUMBER CBTIPE06 20052401 02

This certificate is awarded to THRISHIYA R,
who has undergone Inplant Training in EMBEDDED SYSTEMS,
from 06.01.2024 to 10.01.2024 at CodeBind Technologies, Trichy. During the course of training period, the conduct of the trainee was found to be GOOD.

Training Facilitator

PRINCIPAL

OFFICIAL

Issuing Authority

info@codebindtechnologies.com
+91 99 4040 8010

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CERTIFICATE OF INTERNSHIP

CERTIFICATE NUMBER CBTTINE0620052401O1

This certificate is awarded to **Mr./Ms. SHARMILA D** for the successful completion of **Internship** in **Embedded Systems** at **CodeBind Technologies, Trichy** from **06th January2024** to **10th January2024.**

During the course of the Internship **Mr./Ms. SHARMILA D,** exhibited an enthusiastic attitude for learning. In addition to that he/she is quite industrious and dependable.

We are extremely satisfied with the candidate's performance and would like to wish them very success in their future endeavors.

CODEBIND TECHNOLOGIES TRICHY

Training Co-Ordinator

Issuing Authority

PRINCIPAL

1C, Sandanam's Tower,
EVR Road, Puthur, Thillai Nagar, Trichy - 17.
Landmark: Opposite to Puthur GH
www.codebindtechnologies.com

info@codebindtechnologies.com
+91 99 4040 8010

<codeb!nd/>™

CERTIFICATE OF PROJECT COMPLETION

CERTIFICATE NUMBER CBTTINE062005240101

This certificate is awarded to **Mr./Ms. SHARMILA D,** on the successful completion of the project titled **"Intruder Alarm System Using Arduino IDE with Ultrasonic Sensor"** at **CodeBind Technologies,Trichy** from **06th January2024-10th January2024.**

We found the candidate is highly self-motivated, duty bound and hard working. The performance was above satisfactory and we wish them all the best in their future career.

Training Co-Ordinator

Issuing Authority

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info@codebindtechnologies.com

INPLANT TRAINING CERTIFICATE

CERTIFICATE NUMBER CBTIPE062005240101

This certificate is awarded to SHARMILA D,
who has undergone Inplant Training in EMBEDDED SYSTEMS,
from 06.01.2024 to 10.01.2024 at CodeBind Technologies, Trichy. During the course of training period, the conduct of the trainee was found to be GOOD.

Training Facilitator

PRINCIPAL
M.I.E.T. ENGINEERING COLLEGE

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