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DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

List of Student Undertaking Project Work/Field Work /Internship

Academic Year 2021-22

S.No.	Reg No.	Name	Year	Project Work	Mini Project Work	Internship (Virtual)	Field Visit
1.	712218105001	AJITHKUMAR.R	IV	✓			
2.	712218105002	ANJANA.V.S	IV	✓			
3.	712218105003	ATHUL.J.NAIR	IV	✓			
4.	712218105004	DEEPIKA.M	IV	✓			
5.	712218105006	JAGADEESH.P	IV	✓			
6.	712218105007	KAAMESWARAN.M.A	IV	✓			
7.	712218105009	KAVIARASHE.N	IV	✓			
8.	712218105010	NAVEEN.K	IV	✓			
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10.	712218105012	ROOBANRAJ.M	IV	✓			
11.	712218105013	SATHISHKUMAR.P	IV	✓			
12.	712218105014	SETHU.N	IV	✓			
13.	712218105015	SHILPA NAGENDRAN	IV	✓			
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B.E ELECTRICAL AND ELECTRONICS ENGINEERING

PROJECT LIST (2018-2022)

S.NO.	REG. NO.	NAME OF THE STUDENTS	TITLE OF THE PROJECTS	NAME OF THE SUPERVISOR
1.	712218105001	Ajith Kumar R	IOT based Door Locking System	Mr. V. Ranjith
	712218105004	Deepika M		
	712218105013	SathishKumar P		
2.	712212105002	Anjana V S	Railway Track Fault Detection System	Mrs. Sivakamai
	712212105016	Sribharath A		
	712212105018	Surya Prakash M		
3.	712212105003	Athul J Nair	Vehicle to Vehicle Communication using LI-FI technology	Mr. B M Prabhu
	712212105010	Naveen K		
	712212105012	Rooban Raj M		
	712212105015	Shilpa Nagendran		
4.	712212105006	Jagadeesh P	Head Motion Controlled Wheel Chair	Mr. V. Mani
	712212105011	Pushpa Ragul R		
	712212105017	Surya S		
	712212105501	Mariyamrukshana A		
5.	712212105007	Kaameswaran M A	Underground Cable Fault Detection using Arduino	Mr. V. Ranjith
	712212105009	Kaviarashe N		
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IOT BASED DOOR LOCKING SYSTEM

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Park College of Engineering & Technology Coimbatore 641659. Kaniyur Abstract

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ABSTRACT

A door enables you to enter a room without breaking through a wall. Also, a door enables you for privacy, environmental or security reasons. The problem statement which is the biometric system sometimes is sensitive and will not be able to sense the biological pattern of the employer's fingerprint due to sweat and other factors. Next, people tend to misplace their key or RFID card. Apart from that, people tend to forget their pin number for a door lock. The objective of this paper is to present a secret knock intensity for door lock security system using Arduino and mobile. This project works by using a knock intensity and send the information to mobile application via wireless network to unlock or lock the door.

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CHAPTER 6

CONCLUSION AND FUTURE WORK

6.1 CONCLUSION

Fingerprint lock have gained tremendous benefits compared to conventional key door locks, combination door locks, keyless keypad lock or card reader door locks. Thus, thumbprint door locks surpass security protection, convenience, and speed. Fingerprint reader scanning is the most mature and tested type of biometric technology. Recent studies on biometrics have shown that compared to the hand method, fingerprint is more accurate and cost-effective. The duplication of biometric fingerprint technology is virtually impossible, only one in one billionth of a chance.

Biometric security guarantees a positive method of user identification with something that cannot be lost, replicated or stolen. This system is very cost-effective and easy to install and is designed under different modes which makes it useful.

6.2 FUTURESCOPE

Nowadays there are so many locks and smart devices for home security but most of them have high cost value as well as certain problems for operating and the major drawback is those need a lot of training and time to use. one of the main peculiarity of this innovation is, it is affordable for everyone. During usage on a large scale, adding a lot of improvements in the prototype will exorbitantly benefit the community. Extensions within the app could also be viewing that who's passing through the door by adding the camera and sending the stream directly to the mobile device. Voice Commands can be also included to enhance the security. Motion Detection in case someone roams around the door for a longer time, then the camera will send a recording or that to the Smartphone.

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RAILWAY TRACK FAULT DETECTION SYSTEM

A PROJECT REPORT

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18/06/22
EXTERNAL EXAMINER

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ABSTRACT

For the safety reasons, railroad tracks need to be inspected on a regular basis for detecting physical defects or design non compliances. Such track defects and non compliances, if not detected in a certain interval of time, may eventually lead to severe consequences such as train derailments. Inspection must happen twice weekly by a human inspector to maintain safety standards as there are hundreds and thousands of miles of railroad track. But in such type of manual inspection, there are many drawbacks that may result in the poor inspection of the track, due to which accidents may cause in future. So to avoid such errors and severe accidents, this automated system is designed.Such a concept would surely introduce automation in the field of inspection process of railway track and can help to avoid mishaps and severe accidents due to faults in the track.In India railways transportation service is the cheap and the majority convenient mode of passenger transport and also for long distance and suburban traffic. The main cause of the accidents happened in railways are railway track crossing and unrevealed crack in railway tracks. Therefore, there is a need to have new technology which will be robust, efficient and stable for both crackdetection in railway track as well as object detection. This project discusses a Railway track crack detection using sensors and is a dynamic approach which combines the use of GPS tracking system to send alert messages and the geographical coordinate of location.Arduino Microcontrollers used to control and coordinate the activities of this device.

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CHAPTER-6

CONCLUSION

As per the study the existing systems are time consuming as well as uneconomical. The proposed system is not only overcome these problems but also improve accuracy and crack detection in rails. It is the most economical solution provided in order to achieve good results of railways of our country in order to minimize the stats of accidents caused. There by possible to save precious lives of passengers and loss of economy. It also saves the time and money for identification of crack

6.1.FUTURE SCOPE

- In this project,we are using an ultrasonic sensor for detecting the crack and obstacles in track
- In future, we will also use the cctv system with IP based camera for monitoring the visual video capture from the track
- It will also increase the security for the both rails and passengers

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HEAD MOTION CONTROLLED WHEEL CHAIR

A PROJECT REPORT

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ABSTRACT

Traditional Wheelchairs though have certain limitations with the flexibility, heavy weight of the chair and limited functions. Tremendous developments have been made in the field of wheelchair technology. Be that as it may, even these noteworthy advancements couldn't help the quadriplegics to explore wheelchair freely. Medical gadgets intended to support the Paraplegic and Quadriplegic patients are exceptionally muddled, once in a while accessible and costly. We go for planning a straightforward financially effective programmed wheelchair utilizing MEMS technology for quadriplegics with head and neck versatility. The control system interprets the situation of the user's head into speed and directional control of the wheelchair.

The system is divided into two main units: MEMS Sensor and programmed Arduino Micro Controller. The MEMS sensor senses the change in direction of head and likewise the signal is given to microcontroller. Depending on the direction of the Acceleration, microcontroller controls the wheel chair directions like LEFT, RIGHT, FRONT, and BACK with the aid of DC motors.

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CHAPTER 5
CONCLUSION AND FUTURE SCOPE

5.1 CONCLUSION

In this paper, this work elaborates the design and construction of Smart Electronic Wheelchair with the help of MEMS Module. The circuit works properly to maneuver because the command given by the user. After coming up with the circuit that allows physically disabled to regulate their wheel victimisation associate MEMS device application in their sensible phones and it's conjointly been tested and valid. The detection of any obstacle is with success controlled by the microcontroller. As the person switches on the circuit and starts moving, any obstacle that is anticipated to lie among a spread of four metres are detected by the unhearable device. This planned system contributes to the self-dependency of otherwise abled and older folks

5.2 FUTURE SCOPE

In From the above obtained results, we conclude that the developed head gesturebased control of wheel chair is tested and works satisfactorily in an indoor environment with minimum assistance to the person suffering with Quadriplegia or Paraplegia. It has a good response with MEMS activating the motors connected to the wheels of the chair. The response and distance covered by wheelchair can be further improved if the gear system connected to motors are replaced by crank and pinion joint which has less friction and mechanical wear & tear. In future we would work on this concept to improve the response and embed more sensors like proximity, ultrasonic, GPS to guide the impaired person in much more better way and use this wheel chair even under outdoor conditions

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VEHICLE TO VEHICLE COMMUNICATION USING LI-FI TECHNOLOGY

A PROJECT REPORT

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ABSTRACT

In this paper the detailed System Design of the Vehicle-to-Vehicle Communication is illustrated. The design shows how can we utilize the visible spectrum of light and make it implemented for the Vehicle-to-Vehicle communication. Also, how we can implement the two-second and four-second rule of driving technically which will give the driver alerts before collision so that he can take the decision faster to avoid the collisions to reduce the number of accidents. This can be the part of Intelligent Transport System (ITS) and can be implemented in Smart Cities. Intelligent Transport System(ITS) are advanced applications that are used to provide various innovative services to facilitate road safety and traffic management, Vehicular communication is an advance technology that can be used in ITS. Vehicle-to-Vehicle (V2V) communication system using the emerging wireless system provides early warning signals to reduce road accidents and congestions. To improve the safety of the users a cooperative driving is proposed it also helps to improve the efficiency by enabling vehicles to communicate accident related messages with each other. Cooperative driving can also be advantageous in improving the safety of the neighborhood. It assists and help driver to take proper decision and avoid collision and congestion.The proposed use of Li-Fi Technology comprises mainly of Light Emitting Diode(LED) bulbs as a means of connectivity by sending data through optical spectrum as an optical wireless medium for signal propagation. In fact, the usage of LED eliminates the need of complex wireless networks and protocols. A small scale prototype of vehicle to vehicle communication system using Light fidelity is presented.

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CHAPTER – 6

6.1 CONCLUSION

Vehicle-to-Vehicle Communication is easy and simple to use. With the proposed system warning messages can be transmitted at faster rates that foster drivers to make strategic decision at faster rate which is vital in making strategic decision avoiding accidents and congestion. In future the project can be extended to communicate Vehicle-toInfrastructure for smart city.

6.2 FUTURE SCOPE

LiFi technology is very advanced to WiFi as for wider bandwidth, quick response time and faster than WiFi. In the world every light can be replaced by the LED's and would acts as data hotspot. As it is very cheap everyone can be facilitated, and as it fast everyone can access easily. The problem of radio frequency bandwidth shortage can be solve by using this technique.

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UNDERGROUND CABLE FAULT DETECTION USING ARDUINO

A PROJECT REPORT

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ABSTRACT

In the urban areas, the electrical cables run in undergrounds instead of overhead lines. Whenever the fault occurs in underground cable it is difficult to detect the exact location of the fault for process of repairing that particular cable. The proposed system finds the exact location of the fault. The project is intended to detect the location of fault in underground cable lines from the base station in kilometers using a Arduino micro-controller. This project uses the standard concept of Ohms law i.e., when a low DC voltage is applied at the feeder end through a series resistor to the Cable lines, then current would vary depending upon the location of fault in the short circuited cable. In case of short circuit (Line to Ground), the voltage across series resistors changes accordingly, which is then fed to an ADC to develop precise digital data to a programmed renesas board that further displays fault location in kilometers.

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CHAPTER 5

CONCLUSION AND FUTURE SCOPE

5.1. Conclusion

Thus the project on Underground cable fault detection the use of Arduino became completed and the gap of the fault from the bottom station in kilometers became displayed for the 3 person levels R, Y and B. Circuit may be examined with exclusive resistor values. In this project faults as much as a distance of 5km may be detected. When the fault switches are operated to fault circumstance then the segment similar to that unique transfer is taken into consideration because the defective segment. So the defective segment can effortlessly be located.

5.2. Future Scope

The project detects only the location of the circuit fault in underground cables line, but it can also be extended to detect the location of an open circuit fault. To detect an open circuit, capacitor is used in ac circuits which measures the change in impedance and calculate the distance of the fault.

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