

# **WIRELESS SURVEILLANCE ROBOT WITH MOTION DETECTION AND LIVE VIDEO TRANSMISSION**

*A Major project report submitted in partial fulfilment of the  
requirements for the award of the degree of*

**BACHELOR OF TECHNOLOGY**

*In*

**ELECTRONICS & COMMUNICATION ENGINEERING**

*By*

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## ABSTRACT

The robotics and automation industry which is ruled the sectors from manufacturing to household entertainments. It is widely used because of its simplicity and ability to modify to meet changes of needs. The project is designed to develop a robotic vehicle using android application for remote operation attached with wireless camera for monitoring purpose. The robot along with camera can wirelessly transmit real time video with night vision capabilities. This is kind of robot can be helpful for spying purpose in war fields. The wifi technology is relatively new as compared to other technologies and there is huge potential of its growth and practical application. The android application loaded on mobile devices, can connect with security system . The security system then acts on these command and responds to the user. The camera and the motion detector are attached with security system for remote surveillance. A robot is a machine capable of carrying out a complex series of actions automatically, especially one programmable by a computer. A robot can be controlled by a human operator, sometimes from a great distance. In such type of applications wireless communication is more important. Surveillance security robot provides safety like man. Automatic patrolling vehicle for periodic patrolling in defined or a restricted area, the patrolling vehicle can move automatically to monitor the dead zones and capture the images by using the camera.



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## CHAPTER 8

### CONCLUSION

The purpose of the designing the project is to save the human life. Literally we might know that soldiers are lost their lives to save their respective nations. If we use this device instead of the human we can probably save human lives. This device can observe the enemy's and gives Live updation on regarding situation In my opinion it is very useful device now a days.

  
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## CHAPTER 9

### FUTURE SCOPE

The idea of the paper evolved with a fantasy to see the places we wish to see at will. In this paper, the idea is realized at our fingertips. The paper is done to create a version of spying robot that can enable us to observe the place of our interest. The size of the robot also aids it to be used as a spy robot. Thus to create the robot, we should be able to manipulate its path when necessary. To realize all that, a control unit is required. In this control units RF signal is used. Using these signals encoding is done and signal is sent through the transmitter. In the receiver end these received signals are decoded and given as input to drive the motor. This will help us to manipulate the robot in the manner we want. A video transmitter mounted on top of the robot helps us to see the path of motion. The reason behind manual control of the robot is that it will not be lost owing to absence of human involvement. Further this paper can be extended for industrial applications also by using different types of sensors.

In this project we were used only the stable camera it can't moves for the convenience we have to move the robot in our desired Direction only, further flexibility we can add rotation camera instead of Stable camera.

It just a prototype project we used Bluetooth for the communication it can only able to communicate within the 10 meters range, further we can replace it with capable high range communication component like GSM.

Instead of RPS capable BATTERY'S also works.



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**IOT BASED PATIENT MONITORING SYSTEM**  
*A major project report submitted in partial fulfillment of the requirements  
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## ABSTRACT

Health monitoring is a major problem in today's world. As a result of shortage of proper health monitoring, patients from different diseases suffer from serious health issues. Health-related issues and parameters are of utmost importance to man and are essential to his existence. The main concept of this project is to create a low-cost affordable health monitoring system for people in remote locations where the availability of specialist doctors is not possible. This system is portable. Low cost and can be easily operated by anyone with limited knowledge.

In this we proposed an intelligent patient monitoring system for monitoring the patient health condition automatically through sensors based connected networks. Several servers are used for gathering the biological behavior of patient. This concept is developed by using IOT, so that the information forwarded to IOT cloud. Before inventing IOT, it needs 2-3 days to address an issue. But in IOT, it needs only minutes, seconds to take action. The system is more intelligent that can able to detect the critical condition of patient by processing sensors data and instantly provides notification to doctors/nurses as well as hospital in-charge person. The doctors and nurses get benefited from this system by observing these corresponding patients remotely without visiting the person.




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### CONCLUSION

This project is low cost and secure system of monitoring health remotely, has been proposed in this paper which provides a dashboard for continuous monitoring biological parameters inside a secure environment. The combination of IoT and cloud computing is able to play a vital role on monitoring critical ICU and aged patients. Detailed framework of a data processing and monitoring system for temperature, heart rate has been explained in this paper. The proposed device continuously updates the measured data on Thing Speak cloud server to which corresponding health- workers have access. The early identification of any health issue may help human to take early recovery actions which may possibly save lives. Moreover, it provides SMS alert to corresponding person if vital signs are beyond the secure range. Data taken from 10 individual patients over a period have been presented to validate the usefulness of the system. Furthermore, result analysis between the measured and standard values shows the effectiveness of the proposed device.

The proposed low power patient monitoring system may be a novel addition within the field of medical science and engineering which may reduce unwanted deaths and emergency situations. In addition, this system has the potential to reduce medical costs by cutting down periodical hospital check-ups and doctor visits.

  
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## **CHAPTER 9**

### **FUTURE SCOPE**

Using GSM, we can extend this project in future. GSM network will helpful for sending the SMS to the hospital in charge and doctors. As future work, ECG self-interpretation algorithm can be implemented into the system so that the system can detect the abnormal ECG signal and generate an alert.



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# **AUTOMATIC DOOR LOCKING AND UNLOCKING SECURITY SYSTEM BY USING GSM**

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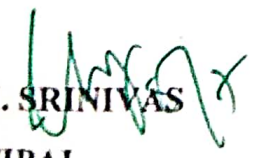
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## ABSTRACT

Now-a-days the home security system is very poor. This abstract consists of a smart door lock system. In this, we develop the solution to improve the home safety system by controlling the door lock with the GSM Module. In order to enter into restricted room, we should have to send an instruction/ password to the registered number of GSM Module.

The GSM Module based smart door lock system here is basically designed for normal mode and multi-mode operations. Such system is very much required in Bank and Business organization. The system also gives functionalities for general user, where single user is authorized to operate the lock.

This system works sending/passing instructions to the GSM number. It increases the security level to prevent an unauthorized unlocking done by attackers. In case the user forgets the passwords, system gives the flexibility to the user to change or reset the password. This smart password-based lock system gives the user more secure way of locking-unlocking the system.



## **CHAPTER 7**

### **ADVANTAGES & APPLICATIONS**

#### **7.1 ADVANTAGES**

- No need to carry virtual keys for locking and unlocking.
- Easy and secure way to lock and unlock.
- Improves the security and safety.

#### **7.2 APPLICATIONS**


- Lockers
- Gold Shops
- Bank Lockers
- Homes and offices

## CHAPTER 8

### FUTURE SCOPE

This project helps in Locking and unlocking of Door with and improved Technology. The project done is of prototype. The future scope of this project can be achieved if this project is done in real time. In this project we have set the specific delay time, for the future scope. we can change the time delay depend on our need in the software program.

We can upgrade this project by adding an spy camera to it, so we can see the person who is locking and unlocking the door.

  
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# **ADVANCED SECURITY SYSTEM IN MILITARY FOR IDENTIFICATION OF TRESPASSERS USING IOT**

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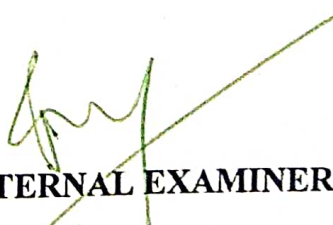
  
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## ABSTRACT

The main objective of this project is to provide security system for trespassers identification in Military. Suppose terrorists' cross borders unknowingly. It is not possible for our soldiers to watch the borders at each and every moment. An essential requirement in security is the capability to automatically detect terrorists or trespassers in borders. In order to overcome this, we proposed "ADVANCED SECURITY SYSTEM IN MILITARY FOR IDENTIFICATION OF TRESPASSERS USING IOT".

In this system we used IR sensor. The main purpose of IR Sensor is when the person tries to cross the border unknowingly, it sends the information using IOT to respective admin and gives an alert to the surrounding people through buzzer and it is displayed on LCD. Then the process will stop their itself. We can easily identity the trespassers and this development enables security to effectively detect trespassers at low cost.

  
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# **CHAPTER 7**

## **ADVANTAGES AND APPLICATIONS**

### **7.1 ADVANTAGES**

- Provide high security.
- Automatic alert system.

### **7.2 APPLICATIONS**

- Secured Offices
- In banks
- In hostels

  
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## CHAPTER 9

### FUTURE SCOPE

- We can add wireless camera to this system to identify the person is authorized or unauthorized.

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# **HOME AUTOMATION WIRELESS NETWORK USING IOT**

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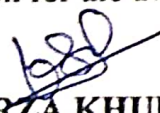
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## ABSTRACT

Home automation is a famous and used technology in the world. The main object of this project is to develop a home automation system with android operating system using WI-FI technology. The automation technology, life is getting simpler and easier in all aspects. In today's world automatic systems are being preferred over manual system. With the rapid increase in the number of users of internet over the past decade has made internet a part of life, and IOT is the latest and emerging internet technology. Internet of things is a growing network of everyday object-from industrial machine to consumer goods that can share information and complete tasks while you are busy with other activities.

Wireless home automation system using IOT is a system that uses computers or mobile devices to control basic home functions and features automatically through internet from anywhere around the world, an automated home is sometimes called a smart home. It is meant to save the electric power and human energy. The process of controlling or operating various equipment, machinery, industrial processes, and other applications using various control systems and also with less or no human intervention is termed as automation.

There are various types of automation based on the application they can be categorized as home automation, industrial automation, autonomous automation, building automation, etc. In this project we are discussing about wireless home automation. Home automation is the process of controlling home appliances automatically using various control in recent years, wireless systems like WI-FI have become more common networking. Also in home and building automation systems, the use of wireless technologies give several advantages that could not be achieved using a wired network only.



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## CHAPTER 8

### CONCLUSION & FUTURE SCOPE

Home Automation can easily implement in our home. And it has that capability which can change your way of living. Certainly, this model comes with flaws and we will try to figure out in future. On the better half, we try to list some points for future aspect,

- ❖ Since, this model is in DC power system. As, we know our home appliances work in AC power system. These two power model are polar a part but ,using a 'relay' we can use this prototyping in AC power system too.
- ❖ As far as privacy is concerned, we haven't have any security feature which come with a serious flaw. In future model, we try to add some security package to enhance privacy.
- ❖ In case of full flow of Door, we have low watt servo rotor which doesn't allow us to rotate full door 180 degree. Along with it, we have manual error which limit the exact displacement of door path.
- ❖ We can have a customized-own app for android and other mobile platform.
- ❖ In desktop application or manual model, we can implemented a voice command feature.
- ❖ Since, we work in lower version of Arduino and it doesn't allow to store huge chunk of code. Due to this memory limitations, we can't implement IOT model in automation code. By, Arduino Mega or Arduino YES we can do it easily.



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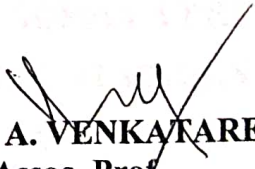
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- ❖ We can have a customized-own app for android and other mobile platform.
- ❖ In desktop application or manual model, we can implemented a voice command feature.
- ❖ Since, we work in lower version of Arduino and it doesn't allow to store huge chunk of code. Due to this memory limitations, we can't implement IOT model in automation code. By, Arduino Mega or Arduino YES we can do it easily.

  
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# **VEHICLE THEFT INTIMATION OVER SMS AND REMOTE CONTROL OF ITS ENGINE**

*A major project report submitted in partial fulfillment of the requirements  
for the award of the degree of*

**BACHELOR OF TECHNOLOGY**

*In*

**ELECTRONICS & COMMUNICATION ENGINEERING**

*by*

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**NUNAVATH SUMALATHA**

**19S45A0408**

Under the Guidance of  
**Mr. K.GOPI KRISHNA**  
Assistant Professor



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# ABSTRACT

The aim of this project is to provide an alert to the user about any unauthorized access of their vehicle with the help of wireless technology. The alert will be in the form of an auto generated SMS sent to the user. In addition to this, the user can reply to this SMS which will disable the ignition of the vehicle. Security system for vehicles is much needed in present times as the percentage of crime keeps on increasing. In this proposed system, if an attempt is made to steal the user's car, the arduino gets intimated about this through a switch mechanism, which then sends an alert to the user in the form of an SMS with the help of a GSM modem.

The user can then reply to this message and based on his command the arduino uno can disable the ignition of the vehicle, thus stopping the vehicle. With the help of this system the user can turn off the ignition of his car from any place. This system is also integrated with a GPS which can provide the exact position of the vehicle in terms of latitudes and longitudes. This information will be available in the SMS sent to the user.

The percentage of auto thefts has been increasing over the past few years. Around \$6.5 billion was lost due to auto thefts in USA during the year 2019. With the automotive sector projected to be increasing in its growth over the forthcoming years, the need for better security systems has become an important issue among automotive industries. The proposed system helps to tackle one of the important drawbacks of the existing security systems. At present there is no tracking facility available in all default security systems but with the proposed system the user will be provided with the exact location of his vehicle at regular intervals of time. The user will also be provided with certain remote control over his vehicle. These improved facilities will help to reduce the rate of crimes related to auto thefts.

  
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## CHAPTER 8

### CONCLUSION

Our project titled "Vehicle Theft intimation over sms and remote control of its engine" is a complete solution for vehicle owner it would not only prohibit any unauthorized use of vehicle but in case if vehicle is theft this system will provide effective tracking of the vehicle. In near future this system will be a vital commodity for vehicle owners. The proposed project would be designed to provide a complete solution to vehicle-theft. We have successfully achieved all the main objectives of our proposed project. The main objective of our system is to stop any unauthorized use of vehicle and in case of theft we have to provide effective tracking. Our project is completing both these tasks as a final result.



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## CHAPTER 9

### FUTURE SCOPE

In future web camera can be installed for identification of theft. A server can be created to record the route of the vehicle. The hardware can be made more intelligent by installing sensors like fire sensors and proximity sensors. While the current security system is much more compatible for cars, with some modifications this system can be implemented for two wheelers also. In countries like India where auto thefts involving motorbikes are on a rise and also with an ever-growing market for two wheelers, this system can help to reduce the crime rates relating to auto thefts. This system can be further improved by introducing a dedicated mobile application which could eliminate the limitations regarding unreliable network connections.



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# **MICRO CONTROLLER BASED DAM WATER LEVEL CONTROLLING SYSTEM**

*A mini project report submitted in partial fulfillment of the requirements  
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**BACHELOR OF TECHNOLOGY**

*In*

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This is certify to that the mini project report entitled “**MICRO CONTROLLER BASED DAM WATER LEVEL CONTROLLING SYSTEM**” submitted by the following students in partial fulfillment of the requirements for the award of the Degree of Bachelor of Technology in ECE, and is a bonafide record of the work performed by

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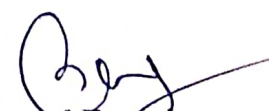
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## ABSTRACT

Each part of our life is somehow linked with the embedded products. Embedded systems are the product of hardware and software co-design. This project describes the design of an embedded system for the "MICROCONTROLLER BASED DAM WATER LEVEL CONTROLLING SYSTEM". proposed system allows your automatic dam gate opening based on water level sensing.

Previously to indicate water level in dam just level pipe indicators are used, or the water is measured by the bigger units like TMC or cusecs. As the motion of the water changes there will be no accurate level of the Water Level measured and the continuous supervision is needed to check the water level. The main drawback of previous method to indicate the water level is the human effort is more and the continuous supervision is needed.

To avoid above drawbacks, we here to propose an automatic dam water level monitor. Our proposed project uses sensors to sense the water level. The sensors are mounted at two different levels in order to check water level and provide signals accordingly when water reaches first sensor it is sensed by it and displayed. when water reaches second sensor it provides a signal to the microcontroller, and it open the dam gate partially. As soon as the water level reaches the third sensor, it signals the microcontroller then signals the motor to run, which is demonstrated as opening the dam gate fully. Thus, our proposed system allows your automatic dam gate opening based on water level sensing.

  
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## CHAPTER 6

### CONCLUSION & FUTURE SCOPE

#### 6.1 CONCLUSION:

The project "MICROCONTROLLER BASED DAM WATER LEVEL CONTROLLING SYSTEM" has been successfully designed and tested. Integrating features of all the hardware components used have developed it. Presence of every module has been reasoned out and placed carefully thus contributing to the best working of the unit. Secondly, using highly advanced IC's and with the help of growing technology the project has been successfully implemented.

#### 6.2 FUTURE SCOPE:

This project is useful for large dam systems to control the overflow of water. We can control the dam gates from any place of the world. Also, we can measure polluted water using pH sensor.



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# **ROBOT CONTROL THROUGH BLUETOOTH**

A mini project report submitted in partial fulfillment of the *requirement for  
the award of the degree of*

## **BACHELOR OF TECHNOLOGY**

*in*

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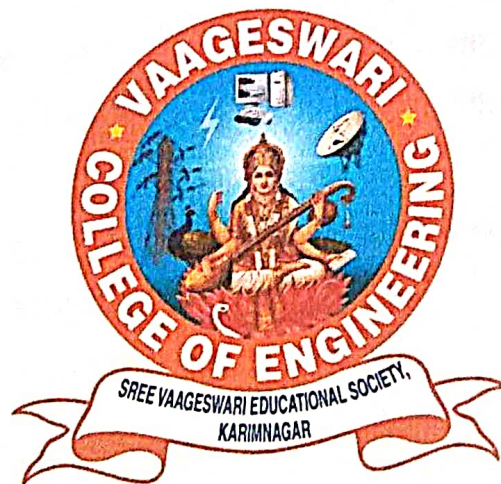
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## ABSTRACT

The project is designed to develop a Robot. The robot which is controlled by a Remote android application Bluetooth, using motors. In this project the robot will check the soil by using soil moisture sensor whether the soil is dry or wet if the soil is dry then the robot gives an indication via Buzzer. The movements and motion of robot is done by using Gear motors which are interfaced to a micro controller through remotely operated commands to it by using any smart phone with android applications. At the transmitting end using android application, commands are sent to the receiver to control the movement of the robot either to move forward, backward, left and right.

In this project we are also using an motor driver IC L293D which acts as an interface between the microcontroller and motors. The Bluetooth module is fed at the transmitting side which gives the commands to the motors which are the receiving side. The buzzer which is used to give an indication about the soil moisture. This project is used to increase the productivity and reduces the human work. In this whole desired project we are using AT89S52 Microcontroller.



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# CHAPTER 6

## CONCLUSION & FUTURESCOPE


### 6.1 CONCLUSION:

The project "ROBOT CONTROL THROUGH BLUETOOTH" has been successfully designed and tested. Integrating features of all the hardware components used have developed it. Presence of every module has been reasoned out and placed carefully thus contributing to the best working of the unit.

Secondly, using highly advanced IC's and with the help of growing technology the project has been successfully implemented.

### 6.2 SCOPE FOR FUTURE WORK:

In future the robots play a vital role in this busy environment because robots are getting more personalized, interactive and engaging. Most of the countries are already using the help of robots to complete their different works, with the growth of this industry virtual reality will enter in our homes. This system is having high degree of future scope because of this less sensor usage & its low cost. In future we can implement other new features like including ARMS for the Robot and other technologies like IOT etc., for long distance. This system is very useful for Agriculture domain.

  
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# **POWER SAVING SYSTEM FOR SHOPPING MALLS BASED ON VISITOR COUNT USING IOT**

*A major project report submitted in partial fulfillment of the requirement  
for the award of the degree of*

**BACHELOR OF TECHNOLOGY**

in

**ELECTRONICS & COMMUNICATION ENGINEERING**

by

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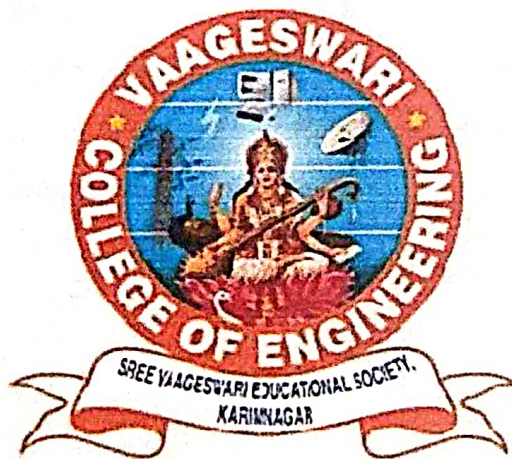
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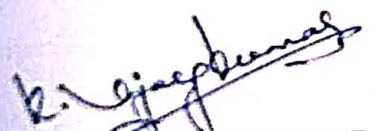
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## **ABSTRACT**

Wastage of electricity is one of the main problems which we are facing nowadays due to our negligence and forgetfulness. The major problem is associated with its generation cost, which is increasing by every passing day and putting undue burden on the consumers as they are forced to pay huge electricity bills. To overcome this problem, a powerful and efficient solution for energy efficient lighting can be adopted to save energy by optimizing home appliances, such as fans, lights, etc.

This project is designed in order to count the number of visitors of malls etc. The system counts both the entering and exiting visitors of malls. Depending upon the sensor interruption, the system identifies the entry and exit of the visitor.

This project provides a method for automatic control of devices such as light, fan of shopping mall. This project is designed around a NODEMCU which forms the control unit of the project

This project takes over the task of controlling the room lights and fans as well as the counting number of visitors in the mall. When somebody enters into the room then the counter is incremented by one and the main circuit gets energized, the lights will be only switched OFF until all the persons in the mall go out.

## CHAPTER 6

### CONCLUSION & FUTURE SCOPE

#### 6.1 CONCLUSION

This project deals with the usage of the energy in this competitive world of electricity. The functioning also teaches us how we can preserve electricity even in the electricity-based project. This system is an effective way of for the power management, automatic device control and together count.

In today's digital world, technology is very advanced are things are preferred to be done automatically without any human efforts. This project helps to reduce human efforts and conserve resources. More over the system is intelligent enough to take decision on its own and is economical as the components used are readily available and inexpensive.



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# **SMART CROP PROTECTION SYSTEM FROM ANIMALS**

*A mini project report submitted in partial fulfillment of the requirements*

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**BACHELOR OF TECHNOLOGY**

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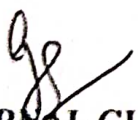



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## ABSTRACT

Agriculture is the backbone of the economy but because of animal interference in agriculture lands, there will be huge loss of crops. Crops in farms are many times damaged by animals like buffaloes, cows, goats, birds and wild elephants. This causes major losses for the farmers. Farmers can not stay on the field for 24 hours and protect it. To overcome this problem, an animal detection system has been designed to detect the presence of animals and it offers a warning and divert the animal without any harm. The designed system will continuously check for any animal to enter the field. IR sensors are used in this project to detect animal movement and to give a signal to the controller. Further the animals are being diverted by generating sound. The complete safety of crops was ensured by this system from animals.

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## CHAPTER 6

### CONCLUSION & FUTURE SCOPE

#### 6.1 CONCLUSION

The project "SMART CROP PROTECTION SYSTEM FROM ANIMALS" has been successfully designed and tested. This project will help farmers in protecting their fields and save them from significant financial losses. Therefore, the designed system is affordable and useful to the farmers. The designed system won't be harmful to animals and person, and it protects the farm.

#### 6.2 FUTURE SCOPE

In the future, there will be a large scope for this system. The IR sensors and Ultrasonic sensors are used to collect the information and transmitted through GSM. This project is further enhanced by wireless sensor network. These sensors gather informations which is useful to the farmers and able to conscious of the farm land from any place in the world.



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