



IJIRCCCE

e-ISSN: 2320-9801 | p-ISSN: 2320-9798



INTERNATIONAL JOURNAL OF INNOVATIVE RESEARCH

IN COMPUTER & COMMUNICATION ENGINEERING

Volume 9, Issue 6, June 2021

ISSN INTERNATIONAL
STANDARD
SERIAL
NUMBER
INDIA

Impact Factor: 7.542



9940 572 462



6381 907 438



ijircce@gmail.com



www.ijircce.com

Automatic Farm Protection System from Animals with Alert

Mr. Megharaj Shahaji Patil¹, Ajay Babasaheb Sonawane², Tushar Yuvraj Yerka³,
Tejas Vijay Arune⁴, Saurabh Tanaji Yamgar⁵

Head of Department, Department of Computer Engineering, JSPM's RSCOE Polytechnic, Pune, India¹

Lecturer, Department of Computer Engineering, JSPM's RSCOE Polytechnic, Pune, India²

Students, Diploma in Computer Engineering, JSPM's RSCOE Polytechnic, Pune, India^{3,4,5,6}

ABSTRACT: Crops in farms are once more and once more ravaged by native animals like buffaloes, cows, goats, birds, and hearth etc. This finally ends up in Brob dingnagian losses for the farmers. it's uphill for farmers to barricade entire fields or continue field twenty four hours and guard it. thus here we tend to propose automatic crop protection system from animals.

This is a Arduino-Uno based totally system victimization microcontroller. this method uses a motion detector to note wild animals approaching close to the sphere. In such a case the detector signals the microcontroller to require action. The microcontroller presently sounds an alarm to woo the animals far from the sphere also as sends notification to the farmer Surveillance system plays a significant role in several fields be it reception, hospitals, schools, public places, farmlands etc. It helps North American country to watch an explicit space and stop felony, animal and additionally provides alert message. within the case of farmlands or agricultural lands police work is extremely vital to forestall unauthorized individuals, animals from gaining access to the realm also on defend the realm from animals. varied ways aim solely at police work that is principally for human intruders, however we tend to tend to forget that the most enemies of such farmers ar the animals that destroy the crops.

This leads to poor yield of crops and significant financial loss to the owners of the farmland. This downside is thus pronounced that typically the farmers conceive to leave the areas barren thanks to such frequent animal attacks. this method helps U.S. to stay away such wild animals from the farmlands yet as provides police work practicality..

KEYWORDS: Farmer helpful, Protect Crops, Farm Protection, Security Alert, Detect Wild-Animals.

I. INTRODUCTION

Animal attacks in Asian nation area unit a typical story these days. Due to the inaccessibility of any detection system these attacks kill villagers and conjointly destroy their crops. Due to lack of correct safety measures, these villa gers are left helpless to their fate. There-fore a an accurate detection system might facilitate save their lives and collectively to the preservation of crops. Also the crops of villagers are destroyed due to frequent interference of animals. The crops and paddy fields can't be invariably enclosed. therefore the risk of crops being eaten away by cows and goats are very much present. this might end in vast wastage of crops created by the farmers. to make the foremost effective use of mobile communication technology, the objectives of this paper therefore utilize global system for mobile communication (Bluetooth) and provide short message service (Notification).

This system helps us to stay away such wild animals from the farmlands furthermore as provides police investigation practicality. it has been found that the odour of rotten egg helps to stay the wild pigs and deer from destroying the crops, hence the farmers manually spray the rotten egg solution on their fields, and firecrackers are wont to block the wild elephants that destroy the crops. This project is based on surveillance with an animal ward-off system employed in farmlands in order to prevent crop vandalization by wild animals. In addition to providing protection this system distinguishes between associate and a certified person using various PIR sensors, LED diode are deployed within the space to detect any motion and hence divert the animals by manufacturing sound once movement is detected. Crops in farms are many times ravaged by local animals like buffaloes, cows, goats, birds etc. This leads to huge losses for the farmers. it's unimaginable for farmers to barricade entire fields or be field twenty four hours and guard it. therefore here we tend to propose automatic crop protection system from animals.

This is a microcontroller-based system using PIC family microcontroller. This system uses a motion sensing element sensor to sight wild animals approaching close to the sector. In such a case the sensing element signals the microcontroller to require action. The microcontroller currently sounds an alarm to woo the animals faraway from the sector furthermore as well as sends notification to the farmer so that he may know about the issue and come to the spot in case the animals draw back by the alarm. This ensures complete safety of crops from animals so protecting the farmers loss.

II. RELATED WORK

This work focuses on farm protection from animals with security alert. To style a farm protection from animals system. a number of the parts needed area unit processor board, intrusion detection sensors, and buzzer alarms etc. In our work, wireless intrusion detector will be use as a sensor, laser diode and laser receivers. When human, animals or birds come in contact with the visualization of the sensors indicates presence of human, animals or birds on the farm land. The system will be activated, one of the new feature included in the work, which is an alarm will be start.

The Bluetooth module is used for sending notification to the farm owner indicating the nature of intrusion. It alerts the farmer that some human (mostly) or animals or birds are on the farm. The other feature includes, the motion sensor and laser which informs the farm owner if a personality's, animals, birds area unit enter during a farm.

III. METHODOLOGY

For accessing the app user first needs to authenticate himself/herself. If the user has already an account he/she can simply login using the email and password. If the user doesn't have an account, he/she can sign up/register from the signup screen as shown in the Figure-1. After successful signup and verification of the email, the user will be redirected to the login page for login, as shown in the Figure-2. From there he /she can login to the website. After successful login, then there will be come request to bluetooth enable then user have to enable their phone bluetooth.

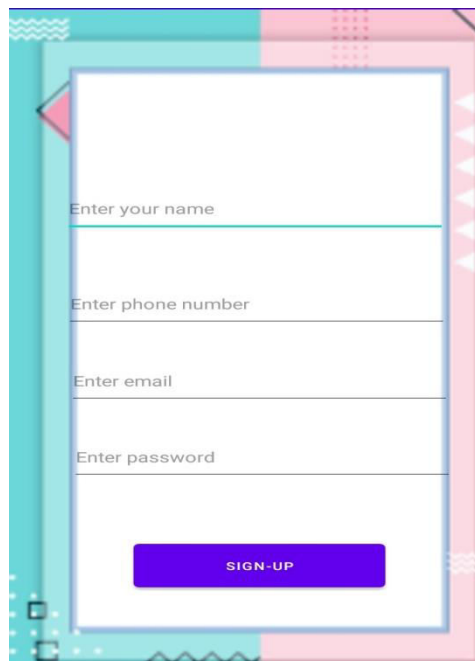
The image shows a mobile application sign-up screen. It has a white background with a decorative border in shades of teal and pink. There are four text input fields stacked vertically, each with a light blue border and a placeholder text: 'Enter your name', 'Enter phone number', 'Enter email', and 'Enter password'. Below these fields is a prominent purple button with the text 'SIGN-UP' in white capital letters. The screen also features a back arrow icon in the top left corner and a close icon in the top right corner.

Fig 1: SIGN- UP Page

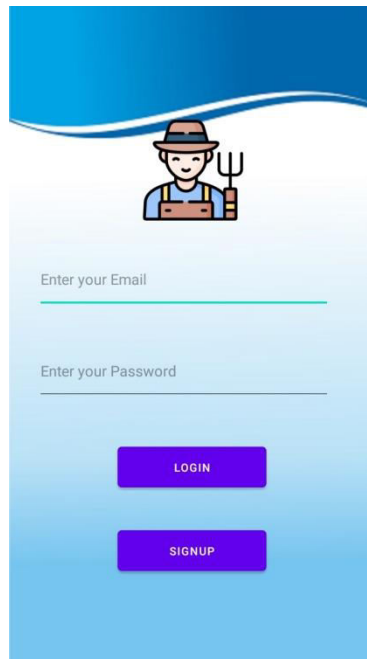


Fig 2:Login Page

After enabling the Bluetooth their will be display list of available bluetooths shown in fig 3 then user have to connect their device bluetooth with HC-05 bluetooth after that their will be message will be display that animal is detected or not.

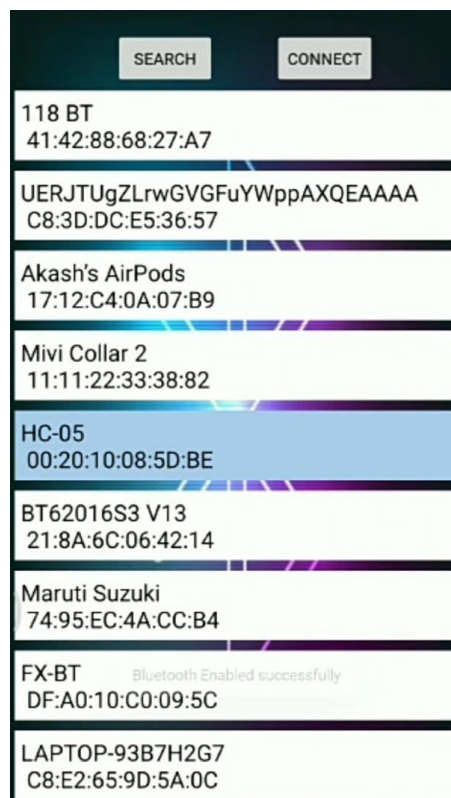


Fig 3: List Of Available Bluetooth

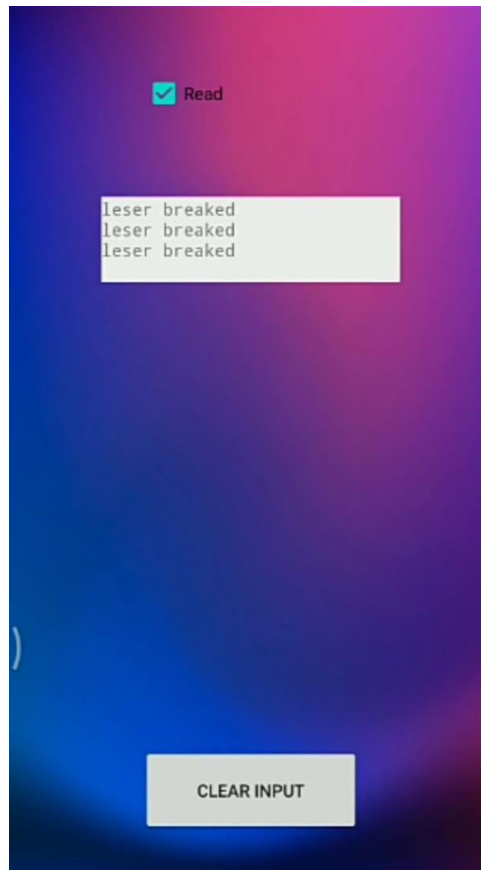
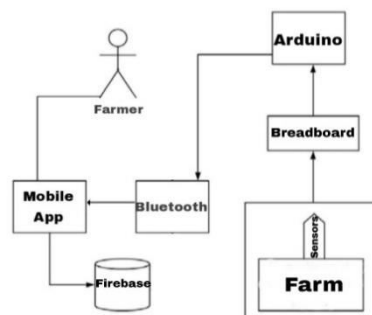


Fig 4: Message Detected

In the “Automatic farm protection system from animals with alert” the most motive is to safeguard the crops from injury caused by animal yet as divert the animals with none damage. In the planned system, Crop observance is finished wherever sensors square measure accustomed collect info within the agricultural field. In our planned work, PIR sensor, Ardiuno , Bluetooth, breadboard, LED Diode, optical device receiver square measure used.

When animals come back almost about the motion sensing element and it detects the animal movement. After obtaining that initial signaling, it's passed for additional process. Then it'll incline to the microcontroller(Ardiuno). Our system will be activated, immediately buzzer will be on, at the same time it sends notification to the owner. Microcontroller Block is used for reading the inputs from motion (PIR) sensor. Whole process is controlled by microcontroller. The bluetooth module is used for sending notification to farmer when movement is detected. It alerts the farmer that some animals attempt to enter into the farm..



Architecture

Fig - 1: Architecture diagram

➤ **Software Required:**

1. Android Studio
2. Arduino Software

➤ **Components Required:**

1. Arduino
2. LED Diode
3. Breadboard
4. Jumper wires
5. Motion sensor
6. Bluetooth Module

➤ **Virtual components:**

1. Firebase Database
2. Mobile Application

➤ **Is it Beneficial for farmers?**

Yes, really it will be helpful to every Indian farmer well right from the varsity going students up to educated employees and so the simple worker of the village. because it covers each and every an area of the activity of village that's purported to be finished the welfare of the villagers. It give every update frequently and it's merely accessible by the traditional of us too.

Project Scope

1. To vogue a security system for farm protection.
2. Prohibit the entry of animal into the form.
3. Use Bluetooth module for alerting the owner of the crop.
4. Design a system that sounds once animal tries to enter into the farm

IV. CONCLUSION

- In rural parts of India, farmers encounter severe threats like injury done by animals. Hence, to beat this issue we have designed a system in which sound is played contend sound will turned on .So that wild animals wont enter into the farm. It will run away.
- Our module sends message to the farmer to alert him. From this it's over that the planning system is implausibly useful and low-cost to the farmer. the planning system will not be dangerous to animal and soul, and it protects farm.

V. ACKNOWLEDGEMENT

It is great pleasure for me to acknowledge the assistance and contribution of number of individuals who helped me in developing “Automatic farm protection system from animals with alert”. First and foremost, I wish to record my gratitude and thanks to Mr. M.S Patil (Project Coordinator) for his enthusiastic guidance and help in successful completion of Project work. I express my thanks to Prof. Mrs. S. S. Gaikwad (Principal), Mr. P. S. Chopade (Head of Computer Department) and Mr.V. P. Badhe (Mentor) for their valuable guidance. I am also thankful to other teachers and non-teaching staff of Computer Engineering Department and Library for their co- operation and help.

REFERENCES

- ❖ 1. w3schools
- ❖ 2. The neon project



INNO  **SPACE**
SJIF Scientific Journal Impact Factor
Impact Factor: 7.542



ISSN INTERNATIONAL
STANDARD
SERIAL
NUMBER
INDIA



INTERNATIONAL JOURNAL OF INNOVATIVE RESEARCH

IN COMPUTER & COMMUNICATION ENGINEERING

 **9940 572 462**  **6381 907 438**  **ijircce@gmail.com**



www.ijircce.com

Scan to save the contact details