Literature Survey on

IOT Based Smart Crop Protection System

for Agriculture

Paper1: IOT Based Crop Protection System against Birds and Wild Animals Attacks

Publication year: April 2020

Authors: P. Navaneetha , R. Ramiya Devi , S. Vennila , P.Manikandan,

Dr. S. Saravanan

Journal name: INTERNATIONAL OF INNOVATIVE RESEARCH IN

TECHNOLOGY (IJIRT 149166)

Summary: Crops in farms are many times ravaged by local animals like buffaloes, cows, goats, birds etc. This leads to huge losses for the farmers to overcome this they proposed a automatic crop protection system. Animal detection system is designed to detect the presence animal and offer a warning. And protect crops from diverting the animals by producing sound and gives signal to the farmer immediately.

Index terms: PIR Sensor, Microcontroller, MATLAB, GPS Module, GSM Module.

Paper2: Smart Irrigation and Crop Protection from Wild Animals

Publication year: April 2020

Authors: N. Penchalaiah, D. Pavithra, P. Bhargavi, D.P. Madhuri,

K. Eliyas Shaik, S.Md.Sohaib

Journal name: JOURNAL OF ENGINEERING SCIENCES (JES)

Summary: In this paper, By measuring four parameters such as soil moistures , temperature , humidity .The intruder detecting system is used to prevent loss of crops and protect agricultural farming area from wild animals. Message is updated to the farmer so he can know about crop field nature at anywhere anytime.

Index terms: IOT, Wild animals, Humidity, sensors, GSM, Relay

Paper3:Smart Crop Protection System for Wild Animals Using IOT

Publication year: 2021 ICCICA

Author: IEEE

Journal name: IEEE

Summary: Crops in the farms are many times devastated by the wild as well as domestic animals and low productivity of crops is one of the reasons for this. It is not possible to stay 24 hours in the farm to sentinel the crops. So to surmount this issue an automated perspicacious crop aegis system is proposed utilizing Internet of Things (IOT). As soon as any kineticism is detected the system will engender an alarm to be taken and the lights will glow up implemented at every corner of the farm. This will not harm any animal and the crops will stay forfended.

Index terms: esp8266 (nodeMCU), soil moisture sensor, dihydrogen monoxide sensor, GPRS and GSM module, servo motor, dihydrogen monoide pump.

Paper4: Smart Crop Protection System Using IOT

Publication year: April 2021

Author: Krunal Mahajan, Riya Parate, Ekta Zade, Shubham Khante,

Shishir Bagal

Summary: This paper defines the methodology used in the smart crop protection system. The purpose of SCPS is to secure or protect the farm from the theft in the farm or main purpose of this project is to alert the farmer as well as fear the animals with getting harm to animals.

Index terms: SCPS, IOT, SD card module, flame sensor, farm.

Paper5: Smart Crop Protection System From Living Objects And Fire Using Arduino

Authors: Dr. M. Chandra Mohan Reddy, Keerthi Raju, Kamakshi Kodi,

Babitha Anapalli , Mounika Pulla

Summary: In this paper when the system detects the motion of wild animals approaching near the field and smoke sensor to detect the fire. In such a case the sensor signals the microcontroller to take action. The microcontroller now sounds an alarm to woo the animals away from the field as well as sends SMS to the farmer and makes call.If there is a smoke ,it immediately turns ON the motor. This ensures complete safety to crops

Index terms: GSM, sensors, DC motor, Buzzer, Arduino Uno

Paper6: Smart Crop Protection System

Authors: Mohit Korche, Sarthak Tokse, Shubham Shirbhate , Vaibhav

Thakre, S. P. Jolhe

Summary: This article provides a comprehensive review of various methods adopted by farmers to protect their crops and also use of modern technology in agriculture. Here they proposed automatic crop protection system from animals. It is a microcontroller based system, as soon as motion is detected it produces signal to take action.

Index terms: Microcontroller, sensors, GSM module, solar panel

Paper7: Smart Crop Protection System from Wild Animals and Birds Using IOT

Publication year: 2021

Authors: Sumana P.B, Sanjana. R, Sharanya.M, Harish N.J

Summary: In this paper, The system implemented is the bird and animal intrusions are being detected by the use of wireless sensors and buzzers which produce acoustic sounds. With the technologies many researchers are recently being carried out on monitoring animal behaviours. Surveillance Video cameras are connected to a set of monitors.

Index terms: Sensor, Arduino, python Anaconda,GPS,Twilio msg service

Paper8: Smart Crop Protection Using Arduino

Publication year: July 2021

Authors: Varshini B.M, Sushma A.V

Summary: In this paper they created a home embedded security system which evaluates the development of a low-cost security system using small PIR sensor build around a microcontroller with ultra-low alert power. PIR sensor detects the presence of any unauthorized person, it triggers an alarm & calls to predefined number through a GSM module. After MCU sends the sensor signals to the embedded system, the program starts the Web camera which captures the images that can be viewed and analyzed later

Index terms: Arduino, GSM, Sensors, Buzzer

Paper9: Review paper on Smart Crop Protection System

Publication year: Feb 2021

Authors: Krunal Mahajan, Riya Parate, Ekta Zade, Shubham Khante,

Shishir Bagal

Summary: In this paper we have seen lots of technology that help to farmer for to protect this farm. Specially IOT based system who can monitor the farm online. It is so affordable to every farmers .hence we want implement a costless smart crop protection system,

Index term: SCPS, IOT, Arduino, Nodemcu

Paper10: Implementation of Crop Protection System Against Wild

Animals Attack

Publication year: February 2019

Authors: Atchaya V, Kowsalya V, Dhivya Bharathi K.P, Arunkumar M

Journal name: International Journal of Advanced Technology in

Engineering and Science (IJATES)

Summary: In this paper, they presented an integrative approach in the field of IOT for smart Agriculture based on Low power devices. For the development of crop protection system awareness is needed regarding the product among the people. The crop can be protected effectively to get high yield. The conflicts between the humans and the animals can be prevented.

Index terms: IOT, Arduino kit, Sensors, Repeller Device, web camera

Paper11: IOT Based Crop Monitoring from Animals

Publication year: March 2019

Authors: K.B Pavan Kumar, T. Bhavithra, S. Karishma, M. Pavithra,

M. Prashanth Kumar

Journal name: Journal of Emerging Technologies and Innovative

Research (JETIR)

Summary: In this paper, the proposed approach is to say that crop damage caused by animal attacks is one of the major threads in reducing the crop yield . In the agriculture sector along , the deployment of IOT has led to smart farming, precision agriculture, just to mention a few. This system presents the development of IOT application for crop protection to prevent animal intrusions in the crop field. A repelling and a monitoring system is provided to prevent potential damages in agriculture from wild animal attack

Index term: PIR motion Sensor, Sound Recognizing Sensor, Buzzers, IOT

Paper12: Microcontroller Based Smart Crop Protection System To Detect Fire and Animals

Publication year: April 2020

Authors: Premjyoti. G Patil, B.Pavan ,B.Siva Sai Reddy,

B. Praveen kumar

Summary: The problem of wild animal attacks on crop field in the example Crop vandalization is becoming a very common phenomenon in our states Animal cause a lot of damage to crops either by running over them or Eating them and vandalizing them completely. This leads to poor yield of crops. These animals attack on fruits orchards and destroy the flowerings and fruits.In both cases, this leads to significant financial loss to the farmer and orchards owners.The problem is so pronounced that sometimes farmers decide to leave the area barren.It is not possible for farmers to barricade entire fields or stay on fields 24 hours and guard it.