

LITERATURE SURVEY

IOT Based Smart Crop Protection System for Agriculture

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IoT Based Smart Crop Protection System

Abstract:

This paper describes overview of various researches on smart crop protection system. We have a lot of technology that can protect the farm 24x7 those systems and technique we are discussing in this paper. We have different types of technology that can help to secure the farm. We have seen Arduino and raspberry pi based Farm protection system. But those Systems have different mythology and platform for that and the cost of those projects also increased so that those are not affordable with the farmer. Our main aim to design a system that can help to farmer to protect his farm from, animals with getting harm to them.

Keywords: SCPS, IoT, Arduino, Nodemcu .

Smart crop protection system from living objects and fire using Arduino:

This paper motive to designing and executing the superior improvement in embedded device for Crops in farms are over and over ravaged with the aid of nearby animals like buffaloes, cows, goats, birds, and fireplace etc. This results in huge losses for the farmers. It is now not feasible for farmers to barricade complete fields or precede field 24 hours and protect it. Therefore here we present computerized crop safety system from animals and fire. This is a Arduino Uno primarily based device the use of microcontroller. This technique makes use of a motion sensor to discover wild animals drawing near the sphere and smoke sensor to discover the hearth. In such a case the sensor alerts the microcontroller to require action. The microcontroller now sounds an alarm to woo the animals away from the sector further as sends SMS to the farmer and makes call, in order that farmer may fathom the difficulty and come to the spot just in case the animals don't farmers to stay related to his subject from somewhere and anytime. Various sensors are used to screen and collect records about the area conditions. Collectively the about the farm circumstance is disbursed to the farmer thru GSM technology.

Review on IoT in Agriculture crop Protection and Power Generation:

Agriculture is that the science and artwork of cultivating plants. Agriculture performs most important position inside the economic development of our us of a and this can be the first occupation from a few years. so as to extend the productivity of the crops and to attenuate the expenses of agricultural practices we adopt smart agriculture techniques

using IOT. The sensors are placed at different locations within the farm, by which the parameters is controlled using remote or through internet services and by interfacing the sensors operations are performed with microcontrollers. India is that the second most populated country. Power generation and supply is typically an unlimited problem. This paper mainly addresses power generation and rainwater harvesting as an influence generation method using energy together with crop protection.

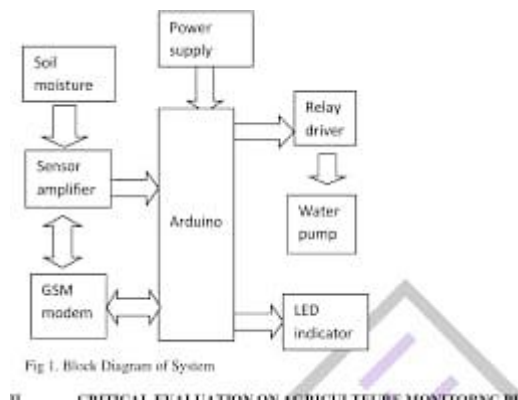
IOT based smart crop monitoring in farm land:

As new technologies has been introduced and utilized in modern world, there is a need to bring advancement in the sector of agriculture also. Various Researches have been undergone to enhance crop cultivation and are widely used. So as to enhance the crop productivity efficiently, it is necessary to monitor the environmental conditions in and around the field. The parameters that has to be exact monitored to enhance the yield are soil characteristics, weather conditions, moisture, temperature, etc., Internet of Things (IOT) is being utilized in a number of real time applications. The introduction of Internet of thing (IOT) along with the sensor network in framer furbishes the traditional way of farming. Online crop monitoring the use of IOT helps the farmers to stay related to his subject from somewhere and anytime. Various sensors are used to screen and collect records about the area conditions. Collectively the about the farm circumstance is disbursed to the farmer thru GSM technology.

Development of IOT based smart Security and Monitoring Devices for Agriculture:

Agriculture area being the backbone of the Indian economy deserves security. Security no longer in phrases of sources solely however additionally agricultural products wishes protection and safety at very preliminary stage, like protection from attacks of rodents or insects, in fields or grain stores. Such challenges should even be taken into consideration. Security systems which are getting used now a days don't seem to be smart enough to produce real time notification after sensing the matter.the mixture of typical methodology with present day technologies as Internet of Things and Wireless Sensor Networks can cause agricultural modernization. Keeping this scenario in our mind we've got designed tested and analyzed an 'Internet of Things' based device which is capable of analyzing the sensed information then transmitting it to the user. This gadget will be controlled and monitored from far off region and it is carried out in agricultural fields, grain shops and bloodless stores for protection purpose. This paper is oriented to intensify the methods to unravel such problems like identification of rodents, threats to crops and turning in actual time notification supported records evaluation and processing besides human intervention. During this device, referred to sensors and digital units are built-in using Python scripts. Supported attempted take a look at cases, we had been capable to obtain success in 84.8% check cases.

Proposed work:



Hardware Requirement:

- Arduino Uno
- Node Mcu
- Flame sensor
- PIR sensor
- SD card module
- Speaker
- Connecting wires
- PCB
- Solar panel
- 12 volt dc battery

Conclusions:

From this literature survey we have seen lots of technology that help to farmer for to protect his farm. Specially IOT based system who can monitor the farm online. In above research papers they are not looking cost of System and so that didn't get affordable to every farmer. Hence we want implement a costless smart crop protection system.

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