

Project Name: IoT Based Smart Crop Protection System For Agriculture

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PROBLEM STATEMENT:

A larger part of individuals are perpetually impacted by the creation of yields. Ranchers, for instance, depend on them for their endurance. The shoppers, then again, rely upon the harvests as it gives them a huge number of utilities. It hence, becomes fundamental to safeguard and keep up with these yields. The venture targets advancing the ranchers' circumstance by keeping them from causing misfortunes because of the harm of yields. Crop disappointment likewise falls apart the nature of the yield accordingly diminishing the nature of living.

SUGGESTIONS:

- Crop assurance from creatures utilizing IR movement finders. The farmland is encircled by walls and each wall is outfitted with different IR movement locators in different levels. Area of each movement finder is studied and put away in the data set. Cameras are set in reasonable areas with the goal that we get a total view over the farmland. At the point when a creature or the gatecrasher enters the field. The IR finders which are put in different levels are utilized to distinguish the sort of the creature which has entered the field and the size of the animal. Alarms can be utilized to alarm when huge creatures enter the field. Furthermore, the camera is actuated when the IR sensor identifies movement.
- A user interface system for farmers to analyze the data. The data to the system are sensor data from Humidity sensor, Temperature sensor, PIR Sensor and they are processed using a microcontroller and stored in a database. This database also gives an overview on crop yields, profit and losses for the farmer, what crop has been sowed and Expenses. This database can be used in the future for analyzing a pattern for best yields, to minimize the expenses and help the farmer take decisions financially.
- Crop protection from environmental factors such as UV rays, temperature, humidity, moisture content in soil. Using color sensors to detect NPK values of the soil and determining its fertility this data can be used to determine what type of fertilizers to be used. These factors can play a major role in crop protection and crop yield. So having control over these will help to improve the yield. Sensors for UV concentration, moisture content, temperature are measured and water sprinklers are used to control the parameters accordingly.