PROJECT SCOPE

Smart Agriculture System Based On IoT

Project Summary

India is an agricultural country, and its really essential sector and its a sector which demands more innovation at this time. Agricultural industry faces a lot of threats like droughts, non availablity of nutrients and many other issues due to lack of knowledge on climatic and soil conditions. Conventional agricultural methods depends on monsoon rains, but due to climatic changes monsoon rains now is insufficient and better irrigation facilities are at demand. In this situation IoT have become a major mile stone in the field of Agriculture.

The objective of this project is to overcome this challenge. The system consist of real time monitoring of soil conditions like Soil Temperature and soil humidity and atmospheric temperature using sensors. The system also collect and inform the local weather conditions from weather reports in Open weather report, enabling them to know abt the temperature, humidity and whether it will rain. These data can be viewed by the farmer from any part of the world using an app and it also let him control the motors in his field using the app by analysing the weather and soil conditions shown in the app. These monitoring proves highly useful in areas of water scarcity.

Project Requirement

This project is to help the farmer to have a good yield. So it must enable a farmer to monitor the crop from anywhere using the web application. The app gives real time data collected by the sensors from his field which includes soil moisture, soil temperature and atmospheric temperature.It also shows the local weather conditions in including temperature, atmosphere humidity, pressure and weather forecast. This enable the farmer irrigate the field using motor control buttons from the control panel provided in the app.

Functional Requirements

To develop a web application, which helps farmer to:

- Monitor soil conditions like, soil temperature and soil humidity from realtime sensors
- Provide Realtime weather forecasting
- Enable irrigation by controlling the motors using the application

Software Requirments

- IBM Watson IoT Cloud
- IoT Online sensors from bluemix
- Open Weather APi
- NodeRed
- Python IDE

Project Deliverables

A web Application that monitors soil moisture, soil temperature, atmospheric temperature, pressure, atmosphere humidity and weather condition and allows a farmer to water the field by controlling the motor.

Project Team

JOHN T BIJU

Project Schedule

To be completed within 30 days(3 to 5 hrs daily)