PROJECT NAME : SMART AGRICULTURE SYSTEM BASED ON IOT

Manager: Nannuri Madhu Geetha

Date:5/07/2020

PROJECT SCOPE

Project Summary:

In olden Days Farmers Used to figure the ripeness of soil and influenced suspicions to develop which to kind of yield. They didn't think about the humidity, level of water and especially climate condition which terribles farmers increasingly The Internet of things (IOT) is remodeling the agribusiness empowering the agriculturists through the extensive range of strategies. This project involves building a smart Internet of Things based agriculture system to monitor the weather conditions and soil conditions and help the farmer to gain better yield. This will be accomplished by using the IBM Watson IoT platform and Openweather API. We use Python language to interact with the system. The eye-catching features of this project include smart irrigation with smart control based on real time field data. Secondly temperature maintenance, humidity maintenance and other environmental parameters. And finally the recommendation to farmers for smart agriculture. Here, we propose a solution using cloud and IoT to monitor the soil and weather conditions. Temperature, humidity and soil moisture sensors are used to obtain the necessary information and push them to the cloud platform. Further we create a web page which is accessed by the farmers to monitor their crop.

Project Requirements:

We create a device in the IBM Watson IoT platform and enable simulation. The simulation is done in the watson IOT sensor simulator. The sensors take reading every minute and upload to the cloud. Node-red is used to wire together the hardware,online services and APIs. To simulate weather information , we create an account in Openweather.org and provide through the sensors. Later, these are used through a web interface to control the motor.

Software Requirements:

IBM cloud, Watson IBM Iot platform,Node-Red,Openweather.org,Iot sensor simulator, Github, Python idle

Project Deliverable:

The project is to provide the farmers with the data regarding the weather and soil conditions through a web app.This makes farming profitable and prevents the damage of the crop in a feasible manner.

Project Team:

Individual project.

Project Schedule:

The project is to be completed in 1 month and work for at least 5 days a week. The project can be divided into two phases, one is retrieving data from iot sensor simulator to node-red and the other for displaying data in UI.

Future Scope:

The project can be further extended to enabling the usage of Al in the agriculture ecosystem. We can also integrate the system using solar panels which replace the conventional electricity methods. We can suggest crops based on the climatic conditions of the data. Based on the water level, we can alert the farmer or automatically turn the motor off.