Smart Agriculture System based on IoT

Project Scope:

1.Project Summary:

Agriculture plays a critical role in the entire life of a given economy. Various issues are hampering the development of the country.

The possible solutions for the problems faced are to opt for modernized agriculture. Agriculture can be made smart by using IoT technologies.

The highlighting feature of this project is that it measures different agricultural parameters, weather conditions, by the GPS module, and with those parameters our developed system suggests the farmer performs such activities like pumping water to the field and suggests a suitable crop.

This helps farmers in increasing the quantity as well as the quality of production, water conservation, and many more.

2.Project Requirements:

Project requirements are defined as the features, functions, or tasks that must be completed to successfully wrap up a project.

i) Functional Requirements:

- Giving suggestions to the farmers about crops.
- Automate the work through android application

ii) Technical Requirements:

- IBM IoT Simulator
- IBM Watson cloud platform
- NodeRed
- Web application

iii) Hardware Requirements:

- Processor: i3 7th gen or higher
- Speed: 2GHz or more
- Storage space: 10GB or more

iv) Software Requirements:

- Weather API
- HTTP/MQTT
- Python

3.Project Deliverables:

- To update the farmers with the new technology and to avoid manual labor
- To supply efficient water through a motor pump and enhance the productivity of crops.
- To meet the difficulties such as severe weather conditions and advancing climate change, and environmental consequences resulting from intensive farming practices.
- To design a model and connect it to the android app and cloud server.

- To enable farmers to have the live data of soil moisture, environment temperature at very low cost so that live monitoring can be done.

4.Project Schedule:

Topic	Start Date	End Date
SRS Documentation	21-05-2020	24-05-2020
Setup Development Environment	23-05-2020	26-05-2020
Backend design	27-05-2020	31-05-2020
Frontend design	01-06-2020	05-06-2020
Testing	06-06-2020	11-06-2020
Report	12-06-2020	19-06-2020