SMART AGRICULTURE SYSTEM BASED ON IOT

- Project Summary:

  o Smart Agriculture System based on IoT can monitor soil moisture and climatic conditions to grow and yield a good crop.

  o The farmer can also get the real time weather forecasting data by using external platforms like Open Weather API.

  o Farmer is provided a mobile app using which he can monitor the temperature, humidity and soil moisture parameters along with weather forecasting details.

  o Based on all the parameters he can water his crop by controlling the motors using the mobile application.

  o Even if the farmer is not present near his crop he can water his crop by controlling the motors using the mobile application from anywhere.

  o Here we are using the Online IoT simulator for getting the Temperature, Humidity and Soil Moisture values.

- Project Requirements:

  o Skills Required: IOT Application Development, IOT Cloud Platform.

  o Functional Requirements:

    i. The web app should use open weather API to get real time weather forecasting data.

    ii. The web app should be integrated with Online IoT simulator to get temperature, humidity, and soil moisture values.

    iii. All the parameters (i.e. temperature, humidity and soil moisture) along with the weather forecasting details are provided to the user.

    iv. App has the feature to control the water motor from anywhere with two operating modes - Auto and Manual.

    v. In Auto mode, the motor will operate automatically based on the soil moisture, temperature and humidity.

    vi. In Manual mode, the controls of the motor are given to the user.

  o Technical Requirements:
    - The system should be available almost all the time.
    - It should be reliable.
    - The system should get the data from the sensors at all times.

- Software Requirements:
  - The system should be able to monitor the parameters and act according to them.

- Project Deliverables:
  - Node.js code for web app.
  - Python code.
  - Readme file for operating instructions.
  - Project Report.
- Project Team:
  - Bhavesh Panjwani (Team manager).
- Project Schedule:
  - The project should be completed within a month i.e. 20th June 2020.