

PROJECT SCOPE

- Project Summary :

Smart Agriculture System Based On IoT:

- * Smart Agriculture System based on IoT can monitor soil moisture and climatic conditions to grow and yield a good crop.
- * The farmer can also get the real time weather forecasting data by using external platforms like Open Weather API.
- * Farmer is provided a mobile app using which he can monitor the temperature, humidity and soil moisture parameters along with weather forecasting details.
- * Based on all the parameters he can water his crop by controlling the motors using the mobile application.
- * 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.
- * 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.
- * This can be a ground-breaking invention for people still using traditional agricultural techniques.

- Project Requirements

IBM cloud account, IOT Application Development , IOT cloud platform , Basic python requirements.

- Functional Requirements

Open Weather API that could deliver real time weather forecasting and Online IoT Simulator to get external factors like temperature , humidity and soil moisture

- Technical Requirements

- * The program is to be written in python and we will be using IBM cloud account too along with lot simulator to lot Watson platform, Nodes to get data and make a web page.
- * Arduino Uno
- * Analog Soil Moisture Sensor
- * DHT22 Digital Temperature and Humidity Sensor
- * MQ-135 Air Quality Gas Sensor Module
- * MQ-7 Gas Tester Carbon Monoxide Detecting Sensor Module 4P 180mA 5V DC
- * MQ2 Gas Sensor, Methane, Butane, LPG, Smoke Sensor
- * Ultrasonic sound sensor
- * LCD 16×2 Alphanumeric Display(JHD162A)
- * Jumper Wires Male to Male, male to female, female to female
- * GSM Modem Module for Arduino
- * Batteries
- * Motor
- * 1 kilo-ohm Resistances

● Software Requirements

IBM cloud , Python ,Open weather API, Nodes

● Project Deliverables

An mobile application that can monitor the temperature, humidity and soil moisture parameters along with weather forecasting details. Also, based on these parameters user can water his crops by controlling the motors.

● Project Team

Gaurav Baghel (gauravbaghel2k@gmail.com)

- Project Schedule

The project duration is 28 days with around 4-5 working hours per day.
Starting from May 2020 till June 2020.