

Smart Farmer-IOT Enabled Smart Farming

Application

Solution Architecture

TITLE	Smart Farmer-IOT Enabled Smart Farming Application
DOMAIN NAME	INTERNET OF THINGS
TEAM ID	PNT2022TMID22828
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Solution Architecture:

- The different soil parameters (temperature, humidity, light intensity, pH level) are sensed using different sensors and the obtained value is stored in IBM cloud.
- Arduino UNO is used as a processing unit which processes the data obtained from sensors and weather data from weather API.
- Node red is used as a programming tool to wire the hardware, software and APIs. The MQTT protocol is followed for communication.
- Through a smartphone application created with the help of MIT App Inventor, the user is given access to all the collected data. Depending on the sensor results, the user may decide whether to irrigate the crop or not using an app. They can control the motor switch from a distance using the app.
- All the collected data are provided to the user through a mobile application which was developed using MIT app inventor. The user could make decision through an app, whether to water the crop or not depending upon the sensor values.

Solution Architecture Diagram:

