

# Smartfarmer - IoT Enabled Smart Farming Application -SOLUTION ARCHITECTURE

**TEAM ID: PNT2022TMID32816**

**TEAM LEADER: UBENDRAN .V**

**TEAM MEMBERS:**

SHERIN BEGUM.M

SIVASRI.S.M

NANDHINI.M

TEMPERATURE AND HUMIDITY SENSOR



L293D (16 PIN IC )



SOIL MOISTURE SENSOR



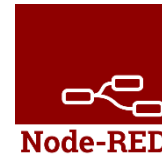
IBM IoT CLOUD



LIGHT INTENSITY SENSOR



pH SENSOR



ARDUINO-UNO



MOBILE APP



OPEN WEATHER API

- 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.
- 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.