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| Smart Farmer - IOT Enabled Smart  Farming Application - Solution Architecture    **TEAM ID**: **PNT2022TMID09965**      **TEAM LEADER:**  GOKUL.K  **TEAM MEMBERS:**  AJMAL KHAN.R  AKASH KUMAR.K  ARFATH.E |

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| |  | | --- | | **TEMPERATURE AND HUMIDITY SENSOR** |  |  | | --- | | **ARDUINO-UNO** |  |  | | --- | | **L293D (16 PIN IC )** | | |
| **SOIL MOISTURE SENSOR** | **SENSOR**    **pH**    **SENSOR**    **OPEN**    **WEATHER**    **API**    **MOBILE**    **APP**    **IBM**    **IO**  **T**    **CLOUD** |
| **LIGHT INTENSITY** |

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| * 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. |