Project Objectives

TEAM ID	PNT2022TMID33417
PROJECT NAME	Smart Farmer - IoT Enabled Smart Farming Application

❖ Agriculture is an integral part of Indian economy. Over 60% of Indian population based upon agriculture and one third of the income of nation arises from agricultural practices. Hence it plays a vital role in the development of the country. One of the most important factors that affect the production of the crops is the controlled management of water, also known as irrigation.

❖ The conventional techniques which were utilized for water system are not exceptionally proficient and in this manner can't adapt up to the requirements and requests of the farmers. Furthermore, the other issue which farmers essentially manage is the various kinds of sicknesses that taint the yields.

❖ The objective of this project is to offer assistance to farmers in getting Live Data (Temperature, Humidity, Soil Moisture, Soil Temperature) for efficient environment monitoring which will enable them to increase their overall yield and quality of products.

❖ This smart agriculture using IoT system powered by NodeMCU consists of a DHT11 sensor, Moisture sensor, DS18B20 Sensor Probe, LDR, Water Pump, and 12V led strip. When the IoT-based agriculture monitoring system starts, it checks the Soil moisture, temperature, humidity, and soil temperature. It then sends this data to the IoT cloud for live monitoring.

❖ If the soil moisture goes below a certain level, it automatically starts the water pump.IoT in agriculture uses robots, drones, remote sensors, and computer imaging combined with continuously progressing machine learning and analytical tools for **monitoring crops, surveying, and**

mapping the fields, and providing data to farmers for rational farm management plans to save both time and money.

❖ The main aims of investing in IoT are to improve operations efficiency, improve product quality, and reduce the costs of production. The Agricultural industry is among the industries seeking to reap the benefits of IoT.