Project Design Phase-I

Solution Architecture

Date	02 October 2022
Team ID	PNT2022TMID00408
Project Name	SmartFarmer - IoT Based Smart Farming Application
Maximum Marks	4 Marks

Solution Requirement:

- ➔ Mobile Application
- ➔ IBM IoT Platform
- ➔ Node Red Service
- ➔ Agriculture IoT sensors
- ➔ Intrusion System
- ➔ Yield Predictive Model

Solution Architecture:

- ➔ The IoT device acts as a central device for collecting data related to crops and its field. This device acts as a pipeline for data streaming and processing of crops.
- ➔ The data collected from the IoT device is transferred to IBM IoT platform for data cleaning, processing and other functionality satisfaction.
- ➔ Based on the Crop data collected from the fields, We can make predictive analytics using deep learning models from python libraries. This can enhance the yearly yield growth of the specified field.

➔ The IBM platform is connected to the Intrusion system which can alert local authorities as well as farmers for caution activities and can save their fields from wild animals and intruders.

Solution Architecture Diagram:

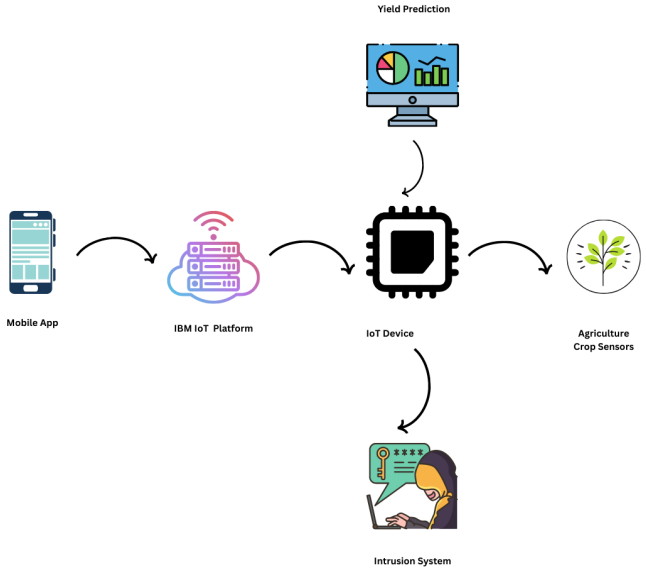

Figure 1: Architecture and data flow of the smart farming application