LITERATURE SURVEY FOR IOT ENABLED SMART FARMING APPLICATION

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DEVELOPMENT OF IOT FOR SMART AGRICULTURE

M.W.P Maduranga, Ruvan Abeysekera(2020) proposed a paper titled "Machine Learning Applications in IOT Based Agriculture And Smart Farming" in International Journal of Engineering Applied Sciences and Technology.This paper introduces Smart Farming using IOT technologies and Machine Learning. The IoT generates big amount data with different characteristics based on location and time. To improve productivity of agriculture through intelligent farm management, the data analyzing must be well analyzed and processed. Highperformance computing capability in ML opens up new opportunities for data-intensive science as the amount of data collected increases; ML algorithms could be applied to further enhance application intelligence and functionality. Hardware: Microcontroller, multiple types of sensors (from simple temperature sensors to cameras), actuators. Software: wireless interfaces could be WiFi, LoRaWAN, Zigbee etc.

Advantages:

1. IoT based data-driven farm management techniques can help increase agricultural yields by planning input costs, reducing losses, and using resources more efficiently.

2. The IoT can easily collect and manage large amounts of data collected from sensors and integrate cloud computing services such as agricultural maps and cloud storage.

Disadvantages:

Without having quality data, predictive models using ML algorithms cannot be created.

PROPOSED WORK:

The proposed IOT based system helps the farmer in monitoring different environment parameters such as soil moisture, disease attack, climatic conditions, temperature, humidity using various sensors.

Farmers can also monitor the working of the sensors with the help of mobile application/web application even the farmer is not near his field.

It mainly focuses on watering the crop, the application decides whether to water the crop or not based on the information given by the sensor.

This method is efficient in reducing wastage of water. The proposed skillsare Python, IBM Cloud, IBM IoT Platform, IBM Nodered, IBM Cloudant DB.

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