SMART FARMER - IOT ENABLED SMART FARMING APPLICATION

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Team ID	PNT2022TMID43471
Project Name	Project – IOT enabled smart farming application
Maximum Marks	4 Marks

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Problem Statement

Despite a growing population, now predicted to reach 9.6 billion by 2050, the agriculture industry must rise to meet demand, regardless of environmental challenges like unfavorable weather conditions and climate change. To meet the needs of that growing population, the agriculture industry will have to adopt new technologies to gain a much-needed edge. New agricultural applications in smart farming and precision farming through IoT will enable the industry to increase operational efficiency, lower costs, reduce waste, and improve the quality of their yield.

Idea Description:

IoT-based agriculture system helps the farmer in monitoring different parameters of his field like soil moisture, Temperature, humidity using some sensors. Farmers can monitor all the sensor parameters by using a web or mobile application even if the farmer is not near his field. Watering the crop is one of the important tasks for the farmers. They can make the decision whether to water the crop or postpone it by monitoring the sensor parameters and control the motor pumps from the mobile application itself. All the sensor parameters are stored in the IBM Cloudant DB.

Novelty

- IoT based Smart Farming improves the entire Agriculture system by monitoring the field in real-time.
- Data collected by smart sensors can track things such as weather conditions, soil quality, crop's growth progress.

Social Impact

- IoT in agriculture is designed to help farmers monitor vital information like humidity, air temperature and soil quality using remote sensors, and to improve yields, plan more efficient irrigation, and make harvest forecasts.

- easy to operate and use and easy to maintain.

- Remote Management. With farms being located in far-off areas and distant lands, farmers are seeking a better solution to their management issues.

Business Model:

This model focuses on the farmers who wish to change their working process smartly. The sensors can be monitored remotely using a software which tracks the data real time and provides statistics of the usage. Alerts are triggered to respective persons when needed. The stats of the fields can be viewed through a dashboard with various details about the events. The field's current condition and nutrients level was provided and can be viewed in realtime. farmers can decrease the fertilizers and pesticides they use, there is less runoff into groundwater and rivers.

Scalability Of the Solution:

The components used for the building up the set up is cheap and the solution is effective as the components are easily available. The sensors in the fields collects the data and sends it to the cloud. IBM Cloud supports thousands of users to access the cloud simultaneously. The system is capable of handling multiple requests and handles data without any flaw. Thus sensors can be handled and viewed remotely there is a vast growth in our product that will be scalable and useful.