Automatic Crop Protection from Rain Fall Using IOT and IBM Cloud

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Abstract: *With the ongoing fourth revolution, technology has been growing rapidly day by day. One of the most significant and efficient uses of this has been evident in the farming sector. From a basic water sprinkler system to the requirement of Fertilizer for specific crops, the likes of Artificial intelligence and the Internet of things have brought in great changes. One of the issues which need to be addressed is the protection of crops from heavy rainfall which causes significant damage to the crop production and soil yield, also causing huge mental distress to a farmer. We in our proposed model have given a solution to this problem by giving automated as well as manual control. The motivation behind our paper is to keep the crops protected from these heavy precipitations and preserve the same rainwater for future purposes when water is scarce. We use a sensor with a NodeMCU module to ensure the covering of the estimated field and LCD display to show status of Field. This project addresses the critical issue of protecting crops from heavy rainfall through the integration of Internet of Things (IoT) technology and the IBM Cloud platform. By deploying a network of sensors capable of measuring rainfall intensity, soil moisture, temperature, and humidity, real-time data is collected and transmitted to the IBM Cloud for analysis. These measures may include adjusting protective structures, or activating drainage systems. The project aims to improve crop yield and reduce losses caused by adverse weather conditions, making agriculture more sustainable and efficient. The combination of IoT and IBM Cloud empowers farmers with real-time monitoring and control, enhancing their ability to protect valuable crops. This project not only demonstrates the practical application of advanced technologies in agriculture but also provides a foundation for future research and development in this field.*

Keywords: Automatic Crop Protection, IoT, IBM Cloud, Heavy Rain, Agriculture, Sensor Deployment, Data Analysis, Automation, Environmental Monitoring, Crop Yield Enhancement, Sustainable Farming.

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