IoT Based Smart Crop Protection System For Agriculture

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Abstract:
Today, technology has penetrated every part of human life. But the contribution of technology to the field of agriculture is considerably low when compared to the other sectors, which saw an incremental growth over the last decade.

The domain of Agriculture contributes the most to the Indian economy and about 1/3rd of India's population is directly dependent on agriculture for their source of income. Considering this, even a small improvement in this sector will make a huge impact on the Indian economy and on the life of farmers. This helps farmers and consumers equally as it is the consumers in the end, who get to enjoy low priced goods without deterioration in quality.

To achieve this, we have to overcome the hurdles faced by farmers, which mostly revolve around crop disease, improper maintenance of crops, lack of details about the quality of soil and intervention of animals and birds. To overcome this, in this project we propose 'An intelligent crop protection system', the main objective of which is to improve the yield and increase the profit for farmers. An intelligent crop protection system uses
data from moisture,motion,temperature,humidity sensors and updates the data in realtime in IBM cross platform IOT cloud interface. The motors and the sprinkling system are activated based on the data from the sensors. Also when the motion sensor detects motion, the farmer is notified with that through the mobile application. This helps the farmers in protecting the crop from the animals and birds which destroy the crop.

And also ease up the maintenance process. The historical data from sensors are stored in cloud, so this can also be used for soil evaluation and this also helps to plan, which type of crops are to be planted in the upcoming seasons so that the yield is high.
The hardware and the software required :
Temperature sensor, Humidity sensor ,Moisture sensor,Motors ,Sprinklers and IBM CLOUDANT AND WATSON IOT PLATFORM is also used.
IBM cloudant is a cloud based database management system which can be used as a distributed database management system, this can be used to store the data from the sensors in clou and can be used for computation from anywhere in the world.