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## **Smart Irrigation System Using IOT**

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Abstract: India is the second-largest irrigated country, but only one-third of the area is irrigated. It is due to uncertain rainfall and lack of water. Most of the areas need canals to be built for irrigation without depending on the rainfall. The utilization of water is very important for irrigation. The implementation of IoT agriculture starts with intelligent irrigation for the majority of fields. Optimizing the water schedule and quantity of water helps us to save water, money, and have the best crop on the field. Sensor-based IoT technology gathers soil moisture, temperature, humidity data, and transmits this information to farm irrigation systems from sensors. A platform responds to these signals and the drip irrigation switches on as soon as there is insufficient water in the soil. Our paper is designed to overcome the problem of irrigation by reducing the usage of water while watering the plants. The proposed system uses sensors like a soil moisture sensor, temperature, and humidity sensor. The microcontroller is used to send data to Blynk and Thing Speak, Blynk application is used to monitor the data, and Thing Speak cloud is used to store the data. This system provides a feasible monitoring platform and automates the irrigation process. This leads to a transition from traditional farming to modern farming. Over 75 years since independence, India has made immense progress towards agriculture.

Keywords: IoT, Irrigation, Water, Sensors, Thing Speak, etc.

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