IoT Based Agriculture Monitoring Framework for Sustainable Rice Production

Authors : Armanul Hoque Shaon, Md Baizid Mahmud, Askander Nobi, Md. Raju Ahmed, Md. Jiabul Hoque

Abstract : In the Internet of Things (IoT), devices are linked to the internet through a wireless network, allowing them to collect and transmit data without the need for a human operator. Agriculture relies heavily on wireless sensors, which are a vital component of the Internet of Things (IoT). This kind of wireless sensor network monitors physical or environmental variables like temperatures, sound, vibration, pressure, or motion without relying on a central location or sink and collaboratively passes its data across the network to be analyzed. As the primary source of plant nutrients, the soil is critical to the agricultural industry's continued growth. We're excited about the prospect of developing an Internet of Things (IoT) solution. To arrange the network, the sink node collects groundwater levels and sends them to the Gateway, which centralizes the data and forwards it to the sensor nodes. The sink node gathers soil moisture data, transmits the mean to the Gateways, and then forwards it to the website for dissemination. The web server is in charge of storing and presenting the moisture in the soil data to the web application's users. Soil characteristics may be collected using a networked method that we developed to improve rice production. Paddy land is running out as the population of our nation grows. The success of this project will be dependent on the appropriate use of the existing land base.

Keywords : IoT based agriculture monitoring, intelligent irrigation, communicating network, rice production

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