

Monitoring of Soil Moisture using Cloud IoT and Android System

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Abstract: *A certain level of soil moisture is a requirement for good plant growth. Additionally, as water is a necessary component for life support, it is necessary to avoid using it excessively. Water is most frequently used for irrigation. This necessitates the regulation of water supply for agriculture. It's best to not over- or under-irrigate pasture. One tool for providing information about the soil is soil monitoring. Systems have been used over time to approach register this goal, with computerized procedures being the most popular because they allow data to be acquired with high persistence and minimal labour demand. The existing structure's size makes microprocessor-based technologies necessary. These systems offer significant technological advances, but they are expensive, bulky, difficult to maintain, and unwelcome by the pastoral scheme's technologically untrained operators. The goal of this project is to lay out a controllable, simple-to-implement method for detecting and specifying the level of soil moisture that is continuously regulated in order to achieve the best plant development and correspondingly increase the available irrigation resources. In this project, the data collected from the input sensors is processed by the neural network algorithm and monitoring correction factors. Soil monitoring is a set of evaluations demonstrating how soil characteristics or conditions change over time. The manufacturing and maintenance expenses are reduced by using readily available, straightforward components. As a result, this system is more practical, suitable, and low-maintenance for applications, particularly in rural and small scale\agriculturists.*

Keywords: Arduino, Wifi Shield, Power Supply, Soil Moisture Sensor, Ph Sensor, Salinity Sensor, And Neural Networks

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