

SMART IRRIGATION NODEMCU-BASED CONTROLLER WITH SOIL MOISTURE SENSOR

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ABSTRACT

Water is the most important resources in our daily living. In the early days of abundant resources and minimal development pressures, only a little attention was paid on water requirements for human daily living. Farmers' need to pay fully attention to their farm as the farmer might not know the soil moisture which is soil humidity's level and it can be resulted of water waste during rainfall season. Therefore, it has become necessary to control the amount of water use as the process of photosynthesis are the serious matter in animal and humans' daily life. The aim of this project is to develop a Smart Irrigation NodeMCU-based Controller with Soil Moisture Sensor (Smartig) that can help farmers by reducing the use of power, the money, time savings and the consumption of water. This project presented a prototype of automatic irrigation system based on the reading of the soil moisture sensor. This prototype includes NodeMCU-controller and soil moisture sensor. The system has been tested using Technology Acceptance Model (TAM). There were 15 participants that involved in the evaluation phase. From the findings, it can be interpreted that most of the participants were agreed to use Smartig. For the future works of Smartig, the system will be enhanced by adding a light sensor, humidity sensor and water level sensor so that Smartig can be more beneficial to the user.

Keywords: Irrigation, NodeMCU, Soil Moisture Sensor, Blynk.