

# **IOT-BASED AUTOMATIC CHILI PLANT WATERING DEVICE PROTOTYPE**

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## **ABSTRACT**

One of the most influential factors in plant growth is watering. Proper watering is essential for cultivating plants, as sufficient water is crucial for their growth. Neglecting this aspect can have detrimental effects on plant development. This study aims to design and implement an automatic plant watering system that can be monitored and controlled remotely via an Android smartphone. Moisture sensors are employed to detect soil moisture levels. The watering process will activate when the soil is detected as dry, and the NodeMCU ESP32 will receive commands from the user through the Android smartphone. The IoT platform facilitates data transmission and monitoring in this system using the Telegram application. The research evaluation involves comparing actual data with readings obtained from the sensors. Testing is conducted by assessing the accuracy of the sensors concerning a soil tester meter.

**Keywords:** Automatic, Soil Moisture, DHT11, ESP32