

DESIGN AND BUILDING OF A WATER LEVEL MONITORING SYSTEM ON A HOME TANDON USING NODEMCU ESP8266 AND BLYNK APPLICATION BASED ON IOT (INTERNET OF THINGS) WITH AUGMENTED REALITY IMPLEMENTATION

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ABSTRACT

The development of science and technology is increasingly rapid nowadays, especially in the field of technology. This development can take the form of progressing tools that were previously traditional into modern tools, or also the discovery of tools that previously did not exist. By using Internet of Things and Augmented Reality technology, water level monitoring systems can be made more efficient and easier to access. The NodeMCU ESP8266 is one of the devices that can be used to implement IoT because it has features such as Wi-Fi connectivity and programming capabilities. In the context of the project mentioned, AR is likely to be used as a way to visualize the information collected by the water level monitoring system in the house reservoir. By using AR technology, users can point their smartphone or tablet camera at the water tank and see real-time water level information displayed virtually on the device screen. This can help users to understand and interpret data obtained from water level monitoring systems in a more visual and intuitive way. The aim of this research is to produce a water level monitoring system that is efficient, accurate, easy to access, and can provide good visual information regarding water levels. This research is NodeMCU ESP8266, a WiFi-based microcontroller, and the Blynk application, an IoT platform that allows users to create remote monitoring and control applications. In addition, this project also involves the implementation of augmented reality (AR) to provide users with a more interactive visual experience. By combining augmented reality technology, users can visualize the water level in their home reservoir interactively via the Blynk Application. This provides an engaging experience and makes it easier for users to understand information visually.

Keywords: Home Tank, NodeMCU ESP8266, Internet of Things, Augmented Reality, Blynk Application