

DESIGN AND DESIGN OF AN IOT-BASED ROOM TEMPERATURE AND HUMIDITY MONITORING AND CONTROL SYSTEM USING BLYNK DATA FOR IMPLEMENTING AUGMENTED REALITY (AR)

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ABSTRACT

The air temperature on the earth's surface is relative, depending on the factors that influence it. This will have a direct impact on changes in air temperature. Plus, the effects of global warming with the process of increasing the average atmospheric temperature also cause climate change with different impacts. Humans always try to find comfortable conditions in the environment. Nowadays almost everyone spends their time inside a building or room. Therefore, temperature regulation is very important for optimal comfort and health. Temperatures that are too hot or cold and high or low humidity levels can cause discomfort for room users. By utilizing LoT technology, the research carried out is IoT-based Temperature and Humidity Monitoring, specifically using the NodeMCU ESP8266 module as a microcontroller and the Blynk Android application as a monitoring tool. This system consists of a DHT11 sensor which is used as a temperature and humidity measurement sensor. And the Blynk web is the recipient of the data which will then be sent and displayed on the Augmented Reality (AR) application and currently electricity is a necessity which is currently a primary need for humans in carrying out daily life, while the basic electricity tariff is currently getting higher. So, savings efforts need to be made so that waste can be reduced and one way to make these savings is by implementing a remote electrical equipment control system that uses the Smart Home Internet of Things (IoT) system.

Keywords: *room temperature, humidity, Internet of Things, temperature sensor, fan, blynk, Augmented Reality*