

# ***IOT BASED AEROPONIC SYSTEM DESIGN AND CONSTRUCTION***

**Luthfi Isa Anshori**

*Electrical Engineering Study Program, Faculty of Science & Technology*

*University of Technology Yogyakarta*

*Jl. Ringroad Utara Jombor Sleman Yogyakarta*

*E-mail : [luthfiisaa@gmail.com](mailto:luthfiisaa@gmail.com)*

## ***ABSTRACT***

*Aeroponics is another method of hydroponic planting, a type of planting that uses a spraying system to the roots of plants to help growth in order to produce quality plants. Lack of agricultural land and also urban farming in urban areas is very busy, rarely to control plants at all times. Therefore, this study uses an IoT-based aeroponic planting system and is monitored using the Blynk application which uses several sensors to control temperature, humidity of the planting medium, and also monitor nutrients in the solution. The main components used are ESP32, DHT22 sensor, soil moisture sensor, TDS sensor, fan, and water pump. Based on the test results, the DHT22 sensor shows room temperature readings with an accuracy of 98.42%, the soil moisture sensor shows readings of the humidity of the planting medium with an accuracy of 96.27%. The TDS sensor shows readings of the nutrients contained with an accuracy of 95.7%.*

***Keywords:*** *Aeroponics, Blynk Application, IoT*