

# DESIGNING SEA TIDES MONITORING TOOL BASED ON INTERNET OF THINGS

**Hasby Hasan Elhak**

*Computer Engineering Study Program, Faculty of Information Technology and Electro*

*Universitas Teknologi Yogyakarta*

*Jl. Ringroad Utara Jombor Sleman Yogyakarta*

*E-mail : [hasby.hasan22@gmail.com](mailto:hasby.hasan22@gmail.com)*

## ABSTRACT

*Nowadays, the development of technology expands rapidly. Many new technologies help humans in getting information quickly and effectively as well, such as monitoring the tides in one day or once 24 hours, with the use of tools based on the Internet of Things (IoT). This tool worked to monitor the tides of the sea in real time. It was equipped with NodeMCU which functioned as a microcontroller of all work tools. Besides, it also functioned to send data via wireless from the work of the waterproof ultrasonic sensor Jsn\_sr04T which functioned as a tool to measure distances. Web-based information systems and Android smartphones as a medium for tidal information in a port area, and the data were saved to a database created using Xampp. Indeed, there were two differences between the functions of this system in the form of a web server that only controlled by the admin or the authorities and android smartphones can be used by the public or everyone to find out the stability and comfort information in taking a decision properly when getting tidal data.*

**Keyword :** *NodeMCU, Ultrasonic Sensor, Web, Android Smartphone, Xampp*

