Universiti Teknologi MARA

INTERNET OF THINGS (IoT) DEVICE FOR WEB BASED ASSESSMENT OF RIVER WATER QUALITY

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STUDENT DECLARATION

I certify that this report and the research to which it refers are the product of my own work and that any ideas or quotation from the work of other people, published or otherwise are fully acknowledged in accordance with the standard referring practices of the discipline.

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ABSTRACT

Nowadays, the river is no longer clean like it used to be where people mostly throw rubbish and other unwanted materials into the river, hence contaminating the water. Water river should be safe for all people to use as water is the main source in daily life. Currently, the quality of water in the river is difficult to determine its level of safety just by looking with eyes. The clarity of the water can be seen with naked eyes, but the level of cloudiness of the water is unknown and cannot be measured with the eyes. The specific devices must be used in order to detect the clearness of water but most of the devices are not widely used and expensive. Hence, this project proposes to develop a prototype that can measure the turbidity or the clearness of water to determine whether the water in the river is safe or not and publish the information online to the people. The prototype developed was tested with sensitivity and functionalities test. Prototype developed using a turbidity sensor to measure water turbidity and using Arduino Uno microcontroller to calculate the turbidity and sent it to Thingspeak cloud database and a website through the internet. The results show that this prototype system is able to measure the turbidity, determine whether the current water turbidity is dangerous and provide this information to be stored in the Thingspeak database and publish on the internet. The system is able to provide useful information, the website is well designed and users had good experience using the prototype.

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