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DEVELOPMENT OF A REAL-TIME INTEGRATED SENSOR FOR WATER QUALITY MONITORING

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Abstract

Water pollution is an issue that is rife in Malaysia and the world today. One way to curb the issue is by effectively monitoring the body of water for the presence of contaminants such as biological or chemical waste. Traditional methods of testing a sample of water in a laboratory may be inaccurate as it cannot provide accurate, real time measurements on the state and condition of the water and also provide early warnings when a potential contaminant or pollutant is detected. This study aims at addressing these issues by presenting a system that is capable of providing real time data on water quality, as well as providing an early warning system if potential pollutants are detected. The system consists of a microcontroller unit, an array of six sensors, a Firebase database and a mobile application. The system was tested with clean and contaminated water and was able to provide real time readings from the sensors and a notification to the mobile phone when tested in contaminated water.

Keyword:

Water Quality Sensor, Water Pollution Sensor, Real Time Sensor, Early Warning System, Internet of Things (IOT)