PROJECT TOPIC

REAL TIME RIVER WATER QUALITY MONITORING AND CONTROL SYSTEM

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ABSTRACT:

This paper deals with the system that is developed to measure the parameters of water such as turbidity, dissolved solvents, pH and temperature. Current water quality monitoring system is a manual system with a monotonous process and is very time-consuming. This paper proposes a sensor-based water quality monitoring system. The main components of Wireless Sensor Network (WSN) include a microcontroller for processing the system, communication system for inter and intra node communication and several sensors. Real-time data access can be done by using remote monitoring and Internet of Things (IoT) technology. Data collected at the apart site can be displayed in a visual format on a server PC with the help of Spark streaming analysis through Spark MLlib, Deep learning neural network models, Belief Rule Based (BRB) system and is also compared with standard values. If the acquired value is above the threshold value automated warning SMS alert will be sent to the agent. Agricultural chemicals include fertilizers (nitrogen and phosphorus) and biocides (herbicides, fungicides and insecticides). The uniqueness of our proposed paper is to obtain the water monitoring system with high frequency, high mobility, and low powered. It detects water temperature, dissolved oxygen, pH, and electrical conductivity in real-time and disseminates the information in graphical and tabular formats to relevant stakeholders through a web-based portal and mobile phone platforms. Since water is one of the fundamental requirements of human survival and life underwater, some mechanism is necessary to occasionally control water quality.

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