**PROJECT TITLE: IOT BASED REAL-TIME RIVER WATER QUALITY MONITORING AND CONTROL SYSTEM**

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**ABSTRACT**

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. The uniqueness of our proposed paper is to obtain the water monitoring system with high frequency, high mobility, and low powered. Therefore, our proposed system will immensely help to be conscious against contaminated water as well as to stop polluting the water.

## LITERATURE SURVEY

| BOOK/JOURNAL | AUTHOR'S NAME | INFERENCE |
|---|---|---|
| Sensor web for River Water Pollution Monitoring and Alert System,2007-2008 | Natasa Marvoic etal` | The objective of this paper is using Sensor web for river water pollution monitoring and alert system. sensor web has provided infrastructure for collecting and processing data from distributed and heterogeneous sensors. The River Water Management and Alert System built on this architecture enable access, control and management of river water pollution. |
| Wireless Sensor Network for river water quality monitoring in India,2013 | K.A.UnniKrishna Menon etal, | This paper introduces a river water quality monitoring system based on wireless sensor network which helps in continuous and remote monitoring of the water quality data in India. The wireless sensor node in the system is designed for monitoring the pH of water, which is one of the main parameters that affect the quality of water. Wireless sensor Network which aids in River Water Quality Monitoring. |
| IOT based detection on water pollution and water management using smart sensors,1990 | Aswinkumar et al , | This research paper focuses on to ensure the safe supply of drinking water the quality should be monitored in real time for that purpose new approach IOT based water quality monitoring has been proposed.This system consists some sensors. Which measure the water quality parameter such as pH, turbidity, conductivity, dissolved oxygen,temperature. |
| An IOT based model for smart water distribution with water quality monitoring,2017 | Joy shah, International journal of Innovative research in Science, Engineering and technology. | The paper focuses on the distribution of water using a water flow sensor and a water control valve to help accurately disperse water and provide adequate water. |
| Design of water management system,2015 | F. Ntambi, C. P. Kruger, B. J. Silva and G. P. Hancke, AFRICON 2015, Addis Ababa, 2015, pp. 1-5 | The system consists of three subsystem wireless sensors. Both communicate wirelessly with each other and send information to a computer connected to the GUI. |