**TOPIC : Real time river water quality monitoring and control system**

**Domain: Internet of things(iot)**

**What Causes River Pollution?**

It’s logical that human settlements have developed near the banks of rivers and streams, since these waterways provide a valuable source of H2O for those dwelling nearby. However, human occupation can have a damaging effect on the bodies of water themselves.

This is a problem which plagues countries around the world. In England, for example, a mere 14% of rivers satisfy the criteria for “good” ecological status, despite the relative wealth and progression of the country. In more impoverished parts of the globe, the issue can be far more serious, endangering the health and lives of the communities which live in the vicinity.

**Real time river water quality monitoring and control system**

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 Bangladeshi populations to become conscious against contaminated water as well as to stop polluting the water.