REAL TIME RIVER WATER QUALITY MONITORING AND CONTROL SYSTEM USING IoT

Submitted by

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PROBLEM STATEMENTS:

1. Due to the fast-growing urbanization supply of safe drinking water is a challenge for every city authority. Water can be polluted any time. So, the water we reserved in the water tank at our roof top or basement in our society or apartment may not be safe. Still in India most of the people use simple water purifier that is not enough to get surety of pure water. Sometimes the water has dangerous particles or chemical mixed and general-purpose water purifier cannot purify that. And it's impossible to check the quality of water manually in every time.

2. It is time consuming and labour intensive. Secondly, the cost for this controlled, displayed, and transferred. Compared to the conventional water quality testing techniques, sensor-based water quality testing has many advantages such as accurate, high sensitivity, good selectivity, speed, fast response, low cost etc.

3. It is difficult to collect the water samples from all the area of the water body. The cost of analysis is very high. The lab testing and analysis takes some time and hence the lab results do not reflect real time water quality measurement due to delay in measurement. The process is time consuming due to slow process of manual data collection from different locations of the water body. The method is prone to human errors of various forms.

4. The system is less effective as sensors are installed very deep inside the water and their positions are fixed. The sensors are very expensive. Moreover, their maintenance cost is also very high. This leads to higher cost on the regulatory body. The sensors which work on power source may often require to be replaced in case of malfunctioning. Mounted Sensors may get damage during natural disasters and often by aquatic animals.