SURVEY OF DEEPIKA

INTRODUCTION

The environment around consists of five key elements e.g., soil, water, climate, natural vegetation, and landforms. Among these water is the utmost crucial element for human life. It is also vital for the persistence of other living habitats. Whether it is used for drinking, domestic use, and food production or recreational purposes, safe and readily available water is the need for public health. So it is highly imperative for us to maintain water quality balance. Otherwise, it would severely damage the health of the humans and at the same time affect the ecological balance among other species.Water pollution is a foremost global problem which needs ongoing evaluation and adaptation of water resource directorial principle at the levels of international down to individual wells. It has been studied that water pollution is the leading cause of mortalities and diseases worldwide. The records show that more than 14,000 people die daily worldwide due to water pollution. In many developing countries, dirty or contaminated water is being used for drinking without any proper prior treatment. One of the reasons for this happening is the ignorance of public and administration and the lack of water quality monitoring system which makes serious health issues

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

CONCLUSION

Real-time monitoring of water quality by using IoT integrated Big Data Analytics will immensely help people to become conscious against using contaminated water as well as to stop polluting the water. The research is conducted focusing on monitoring river water quality in real-time. Therefore, IoT integrated big data analytics is appeared to be a better solution as reliability, scalability, speed, and persistence can be provided. During the project development phase an intense comparative analysis of real-time analytics technologies such as Spark streaming analysis through Spark MLlib, Deep learning neural network models, and Belief Rule Based (BRB) system will be conducted [20- 27]. This research would recommend conducting systematic experimentation of the proposed technologies in diverse qualities of river water in Bangladesh.

SURVEY OF KARL ANDERSSON

INTRODUCTION

In the 21st century, there are lots of inventions, but at the same time were pollutions, global warming and so on are being formed, because of this there is no safe drinking water for the world's pollution. Nowadays, maintaining pure supply of water to the people is getting more challenging day by day. In India mainly is big cities the municipality corporation use lots of chemical to purify the river water then supply that to the people. And we reserved that water without any test. And we also don't know the water is either safe for drinking or not.And now a day's water quality monitoring in real time faces challenges because of global warming limited water resources, growing population, etc.

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

CONCLUSION

In this work, the design and demonstration of a prototype remote, automatic, portable, real time, and low cost water quality monitoring system is described. In this system, low cost components i.e. microcontroller, LCD screen and other components are used to achieve the objectives of the proposed design with acceptable accuracy. Compared to the previous related works, the cost of the system prototype is considerably low. To ensure the portability of the device, a self-made, small size Arduino Microcontroller is used. The developed system was tested under different conditions, with solution of water with different impurities, and in different periods of time. The results of the test for all times have been successful. We conclude that all the objectives of the proposed system have been achieved. To test more parameters of the water quality for some applications, other sensors can be included in the system. The system has wide application and it is usable and affordable by all categories of users.

SURVEY OF MOHAMED K.HASSAN

INTRODUCTION

The Integration of the different types of devices and sensors enable the data collection. The data is then processed enabling the system to make decisions based on the already loaded decision rules. This allows the exploration of new opportunities, for example improving the sustainability of environmental resources, such as water in our case. The ability to control and manage this

valuable resource efficiently will hugely affect the life cycle of the water system. To be able to collect the water quality data wirelessly in real time makes it easier to control such quality based on the consumer preferences. In addition, to further judge the water quality at different seasons of the year. The suggested system should enable the optimization of the efforts and cost spent on the manual data collection and the logistics of sending the samples to chemical labs for processing. Not only that, but the results coming from the labs will be old and after the fact data. As by the time the analysis results are available, most probably the inlet water characteristics have changed. Allowing the ability of real time monitoring should enable the uphold of the water quality at the present levels required by the application. This paper starts with introduction then topics are covered through the sections of the literature review. The paper discusses the industrial revolution and then the development of the smart systems to monitor the water quality.

ABSTRACT

Using Internet of Things should allow for the integration of real time monitoring and controlling of water quality. The suggested system utilizes Internet of Things (IoT) through using sensors to measure the water quality factors such as (pH, temperature and turbidity) for home applications. The system should allow for autonomous decision making for controlling the water quality factors such as (acidity, alkalinity, temperature and amount of total suspended solids expressed by cloudiness or haziness) measured by mentioned sensors within the acceptable limits and keeping records of the historical readings on a cloud based platform. The system will lead to real time data acquisition, transmission and processing of water quality data. This will give the ability to automatically react to the changes in the system outputs. Using Internet of Things means the system can be accessed from anywhere through Internet, for example through a mobile application remotely. The objective of the system is to allow the water consumer in home to be able to judge the quality of the incoming water and to control it to the required levels. The system also utilizes the different filters used in home to enhance the water quality in an efficient way. As the filters will only be used once needed and not all the time. Utilizing such, a system should lead to improving the public health and the cost of controlling the quality of the consumed water. The system should eliminate the inconvenient and lengthy off line lab analysis of collected water samples. The system should provide a user-friendly interface with info graphics and meters to illustrate the quality factors as Lower-Upper limits and the acceptable values. In addition, the system should provide an easy way for the configuration of the controllers and the communication with the sensors.

CONCLUSION

The introduction of an efficient smart water quality monitoring system, aims to eliminate the cost of the water samples analysis at off line lab. In addition, giving a clear indication of the water quality factors to avoid any diseases effects public health and the cost of controlling the quality of the consumed water. This system support the concept of a smart city that does not require human interactions and reduce the labor and operation costs. Also utilizes the different filters used to enhance the water quality in an efficient way. As the filters will only be used once needed and not all the time.