

REAL-TIME RIVER WATER QUALITY MONITORING AND CONTROL SYSTEM

TEAM ID :

PNT2022TMID15959

TEAM MEMBERS :

1. PRIYANKA DEVI P (927619BEC4153)
2. NAGAHARI PRIYA S K (927619BEC4124)
3. SANGAVI S (927619BEC4169)
4. OVIYA S (927619BEC4139)
5. RAASIKA S (927619BEC4154)

INDUSTRY MENTOR NAME :

1. SOWJANYA
2. SANDEEP DOODIGANI

INSTITUTION MENTOR NAME :

DR SIVANANDAM K (AP/ECE)

ABSTRACT :

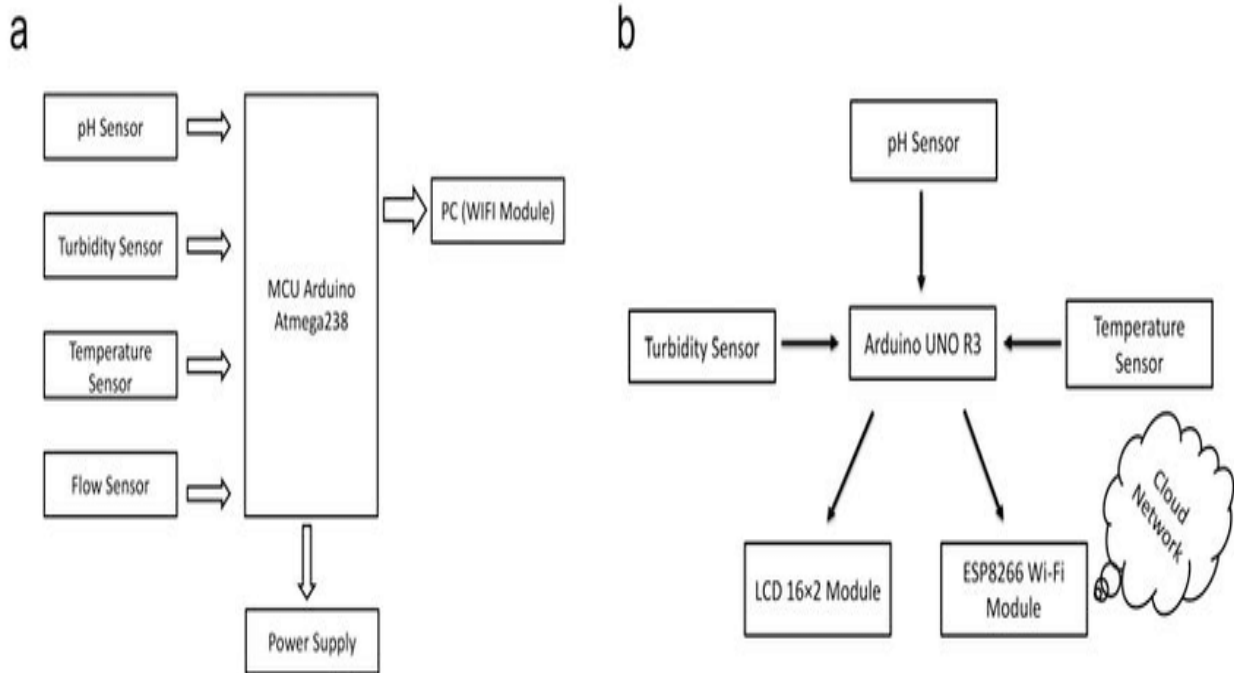
Current water quality monitoring system is a manual system with a monotonous process and is very time-consuming. This paper proposes a sensor-based water quality monitoring system. The main components of Wireless Sensor Network (WSN) include a microcontroller for processing the system, communication 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.

LITERATURE REVIEW:

AUTHOR: Abhijit Pathak , Talha Bin Emran

DESCRIPTION: 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 system consists of several sensors which is used to measure physical and chemical parameters of the water. The main components of Wire++less 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. 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.



AUTHOR: Karl Anderasson

DESCRIPTION : 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 ML lib, 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.

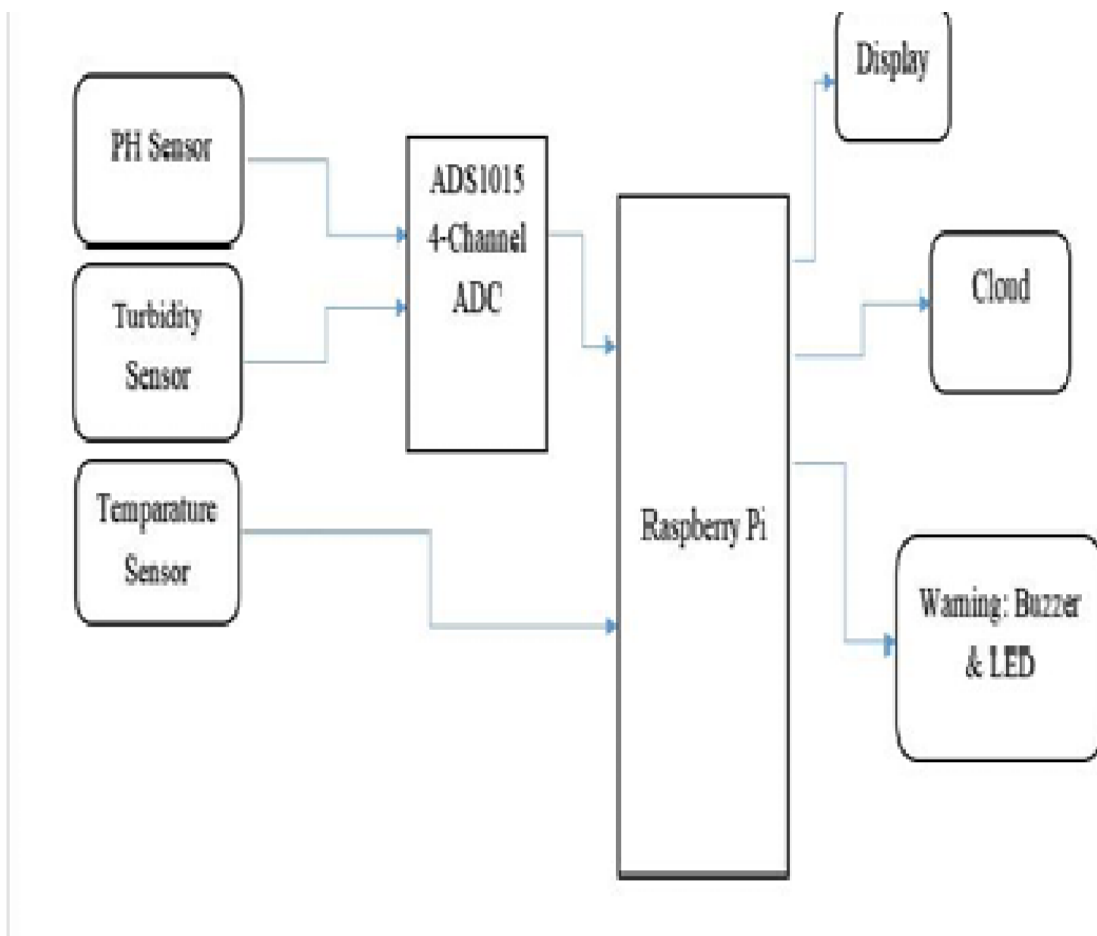
AUTHOR: Mohammad Salah Uddin Chowdury

DESCRIPTION: 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 ML lib, 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.

AUTHOR: Jyotirmaya Ijaradar

DESCRIPTION: Ensuring safe water supply of drinking water is big challenge for modern civilization. Traditional methods that rely on collecting water samples, testing and analyses in water laboratories are not only costly but also lack capability for real-time data capture, analyses and fast dissemination of information to relevant stakeholders for making timely and informed decisions.

In this paper, a real time water quality monitoring system prototype developed for water quality monitoring in Residential home is presented. The development was preceded by evaluation of prevailing environment including availability of cellular network coverage at the site of operation. The system consists of a Raspberry Pi, Analog to Digital Converter, Water quality measurement sensors. 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.



AUTHOR: Yashwanth Gowda K. N, Spoorth G.B

DESCRIPTION: there is a need of better methodologies for monitoring the water quality. Nowadays water is the most valuable for all the human beings drinking water utilities faces challenges in real-time operation. These challenges occurred because of growing population, limited water resources, ageing infrastructure etc. Hence related diseases and prevent water population World health Organization (WHO) has also stated this crisis as "the largest mass poisoning of a population in history. The main goal of this paper to build a Sensor-based Water Quality Monitoring System. Keywords pH, Temperature and Turbidity sensors, arduino board. Technique is very high due to the operation cost, labor cost and equipment cost, and it is difficult to make critical decisions in the real time.

AUTHOR: Netra Jalagar

DESCRIPTION: Water pollution is one among the most important fears for the green globalization. In order to ensure the safe supply of the drinking water the quality needs to be monitor in real time. In this paper we present a design and development of a coffee cost system for real time monitoring of the water quality in IOT(internet of things). The system contains several sensors is employed to measuring physical and chemical parameters of the water. The parameters like temperature, pH, turbidity, flow sensor of the water are often measured. The measured values from the sensors are often processed by the core controller. The Arduino model is core controller. Finally, the sensor data are often viewed on internet using WI-FI system.

AUTHOR: Subhasish Chatterjee

DESCRIPTION: A real time water quality monitoring system prototype developed for water quality monitoring in Residential home is presented. The development was preceded by evaluation of prevailing environment including availability of cellular network coverage at the site of operation. The system consists of a Raspberry Pi, Analog to Digital Converter, Water quality measurement sensors. 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. s to develop a system for real time quality assessment for water health at residential places using Raspberry Pi. pH, Turbidity and Temperature sensors are used to gather the parameters necessary to monitor water health in real time.