LITERATURE SURVEY

TOPIC : IOT BASED RIVER WATER QUALITY MONITORING ANDCONTROL SYSTEM

This project proposes a sensor-based water quality monitoring system. The main components 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 technology used in this project are IOT webpage, PHP code, MYSQL database, SMS alert, e-mail alert, temperature sensor, PH sensor and turbidity sensor. Water's PH level, temperature, turbidity value and date/time will be stored in webpage .If the acquired value is above the threshold value automated warning SMS alert will be sent to the specified account. The uniqueness of our proposed project is to obtain the water monitoring system with high frequency, highmobility, and low powered. Therefore, our proposed system will immensely help people to become more conscious against contaminated water as well as to stop polluting the water.

IoT Based Real-timeRiver Water Quality Monitoring System

Author: Mohammad Salah Uddin Chowdury

Published in: The 16th International Conference on Mobile Systems and Pervasive Computing (MobiSPC)
August 19-21, 2019, Halifax, Canada

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 pollutingthe water.

IoT-based River Water Quality Monitoring Design for Smart Environments inCimahi City

Author:HP Hanifah, SH_Supangkat

Published in: 2019 International Conference on Electrical Engineering and Informatics (ICEEI)
Date of Conference**:** 09-10 July 2019

Smart Environment is one of the Smart City domain that has a primary focus on using technology to help the government to create a comfortable environment for the community. River water pollution is a significant concern in Cimahi City, which hasan industrial area where most of its waste is discharged through rivers. Although there are regulations regarding the placement of wastewater treatment plants before disposal of wastewater, rogue industry players still commit violations that cause river water pollution by industrial waste. Therefore, appropriate technology is needed that can be used to monitor and classify river water quality based on the level of water pollutionin various river locations. .

Smart Environment is one of the Smart City domain that has a primary focus on using technology to help the government to create a comfortable environment for the community. River water pollution is a significant concern in Cimahi City, which hasan industrial area where most of its waste is discharged through rivers. Although there are regulations regarding the placement of wastewater treatment plants before disposal of wastewater, rogue industry players still commit violations that cause river water pollution by industrial waste. Therefore, appropriate technology is needed that can be used to monitor and classify river water quality based on the level of water pollutionin various river locations. .

An IoT Based Smart Water Quality Monitoring System using Cloud

Author :manimegalai

Published in: 2020 International Conference on Emerging Trends in Information Technology and Engineering (ic-ETITE)

The Internet of Things (IoT) is the network of physical devices, vehicles, home appliances, and other items embedded with electronics, software, sensors, actuators and connectivity which enables these things to connect and exchange data. The number of IoT devices has increased 31% year-over-year to 8.4 billion in 2017 and itis estimated that there will be 30 billion devices by 2020. Water pollution is a major environmental problem in India. The largest source of water pollution in India is untreated sewage. Other sources of pollution include agricultural runoff and unregulated small scale industry that results in polluting, most of the rivers, lakes and surface water in India.

IoT based water qualitymonitoring system for rural areas

Author: Ali_Hadi_Abdulwahid

Published in: 2020 9th International Conference on Renewable Energy Research and Application (ICRERA)

To ensure that safety is guaranteed, it is essential to implement monitoring in real-time for the quality of potable water. This work is about the use of Internet of Things (IoT) technology to develop an affordable system to control water quality in real-time. Several sensors are integrated into the system to measure various chemical and physical water properties, such as conductivity, pH, turbidity, and temperaure

Real Time Internet of Things (IoT) Based Water Quality Management System

Published by Elsevier B.V. Peer-review under responsibility of the scientific committee

of the CIRP Design Conference 2020.

Author: Saif AllahH. AlMetwally MohamedK .Hassan MohamedH .MouradThe

rapidly transforming technologies and changingof people’s expectations

triggered the fourth industrial revolution, commonly referred to as Industry 4.0. Water is the core resource and a vital for life of all species, as it is a limited resource that needs to be utilized efficiently. Monitoring various aspects of the water quality leads to a clear understanding of the aspects that should be considered for a healthy life and to avoid wastage of water. Using Internet of Things (IoT) should allow for the integration of realtime monitoring and controlling of water quality.

IoT Based Real-Time SpringWater Quality Monitoring System

Published in: 2022 1st International Conference on the Paradigm Shifts in Communication, Embedded Systems, Machine Learning and Signal Processing (PCEMS)

Author: Aditya Roy; Subhadeep Mukhopadhyay; Sahadev Roy.

As the technologies in different fields are developing rapidly to improve society forthe betterment of human life, more and more environmental problems are arising. Water is one of the most crucial elements for human life to sustain on this planet. Soto monitor the coantinuous supply of filtered and purified water is becoming moreimportant nowadays. Now, most of the monitoring systems that are present today are not automated and also equipped with the same repeated process and also verytime-consuming. In this proposed work we present a water quality monitoring systemthat will be consists of various spring water quality measuring sensors, microcontroller for processing gathered data and various communication systems for node communication with the cloud server.

IoT Watercare: Water Quality Control System in Unofficial

Settlements of perubased in an IoT Architecture

Author : JuanelvSalgado; César Pizarro;Lenis Wong; José Castillo

Published in: 2022 31st Conference of Open Innovations Association (FRUCT)

Many homes in the country of Peru, especially those located in unofficial settlements, are not connected to public service networks, and in the case of residential water, require tanker truck delivery. However, this water has often beencontaminated from the upstream storage, conveyance and delivery systems that provide it, and thus will not comply with government water quality standards, ultimately compromising the health of the people who rely on it. While the topic of quality monitoring in traditional water networks has been studied,research has not focused on water quality control in under-developed and under-served unofficial settlements. This study introduces an IoT architecture and web-based system for real-time monitoring of the key water quality parameters to help municipalities and other government entities to act early when large volumes of low-quality water aredetected.