Team list:

1.TEAM LEADER   – JANANI.R

2.TEAM MEMBER 1 – AARTHI.M

3.TEAM MEMBER 2 – GAJALAKSHMI.R

4.TEAM MEMBER 3 - BHUVANESHWARI.K

LITERATURE SURVEY:

1.Title :   River Water Quality Check

 Author :   MOHAMMAD SALAH UDDIN CHOWDURY

 PUBLISHED IN : "The 16th International Conference on Mobile Systems and Pervasive Computing (MobiSPC)" On 2019.

DESCRIPTION :   The current approach for monitoring water quality is manual, has a tedious process, and takes a lot of time. This research suggests a sensor-based system for monitoring water quality. Multiple sensors make up the system, which measures the physical and chemical characteristics of the water. A microprocessor for system processing, a communication system for inter- and intra-node communication, and a number of sensors are the core elements of a wireless sensor network (WSN). Remote monitoring and Internet of Things (IoT) technology can be used to access real-time data. With the aid of Spark streaming analysis through Spark MLlib, Deep learning neural network models, Belief Rule Based (BRB) system, and data acquired at the separate site, may be presented in a visual way .

2.Title :   Real Time River Water Quality Check

 Author :   JYOTIRMAYA IJARADAR

PUBLISHED IN : "International Research Journal" Of Engineering and Technology On March 2018.

DESCRIPTION :   In this era of increased environmental awareness, the need for effective and efficient water quality monitoring, evaluation, and control in residential areas has increased. pollution, urbanisation, and population expansion. Ensuring Providing safe drinking water is a major concern for contemporary society. conventional techniques that rely on gathering water samples, testing and analysis in water In addition to being expensive, laboratories also lack the capacity for capture, analysis, and quick dissemination of real-time data providing pertinent stakeholders with information for making timely and making wise decisions. This study uses a real-time water quality Water quality monitoring system prototype built monitoring in a

residential setting is shown. The Evaluation of the current situation came before growth environment, including if a cellular network is available.coverage at the operation's location.

3.Title :   **Wireless River Water Quality Check**

Author :   **SAFAA NAJAH SAUD AI-HUMAIRI**

PUBLISHED IN : " IEEE Control and System Graduate Research Colloquium" On 2021.

DESCRIPTION :   Wireless communication is developing new sensing capabilities and implementations. The most current advancements in sensor networking are crucial for environmental applications. The Internet of Things (IoT) enables connections between various devices to share and collect data. IoT enhances its potential by utilising Industry 4.0 to address environmental issues in addition to automation. Since water is essential to both human survival and life underwater, some sort of system is occasionally required to regulate the quality of the water. In order to improve water quality, this research suggested an autonomous robot equipped with real-time multimodal (pH, temperature, voltage, and rubbish level). To track the water quality, the data were collected using sensors, sent over Wi-Fi to a mobile application created by an MIT inventor, and then stored in the cloud.

4. Title: **River Water Quality Check Using pH Sensor**

Author :   **PRIYA S.BHAGAT**

PUBLISHED IN : "International Journal Trend in Scientific Research and Development " On 2016.

DESCRIPTION :   Monitoring the water quality is necessary to ensure a secure supply of drinking water. Although it takes time, monitoring the water parameter is a sophisticated operation that involves numerous laboratory testing procedures. The Internet of Things (IoT) system for monitoring water quality comprises of a variety of sensors that are used to measure the water's properties, including temperature, pH, turbidity, and CO_2. The Arduino pro tiny microcontroller, which may be utilised as a core controller, can process the parameter measurements from the sensors. Water in the IOT platform is continuously monitored by the system.

5. Title :   **Real Time River Water Quality Check Using Zigbee Technology**

Author :   **ASISH SAHADEVAN**

PUBLISHED IN : " International Conference on Mobile Systems On May 2012".

DESCRIPTION : System consists of a WSN, with a number of sensor nodes with networking capability for monitoring Remote data acquisition Parameters nsidered include - temperature, turbidity and pH Reduces the overall cost, increases the flexibility ZigBee-high transmission power with relatively low power consumption .

6.Title :   **Real Time River Water Quality Check**

 Author :   **SIDDIG GOMHA**

 PUBLISHED IN : " International Research Journal" Of Engineering and Technology On July 2019"

DESCRIPTION :   Water is one of the primary requisites and crucial for sustaining the quality of life. For this purpose, an Internet of Things (IoT) based water quality system capable of measuring the quality of water in real time is proposed. The proposed solution is based on World Health Organization (WHO) defined water quality metrics, which include turbidity, temperature, dissolved oxygen level, pH level, dissolved ammonium, potassium, nitrate and conductivity. World Health Organization (WHO) has defined safe ranges for each of the water quality parameters as shown in Table 1. • For this purpose, a real time embedded prototype will be developed to record the water quality parameters from the water samples collected from various sources across the study area. The sensors network sends data to cloud for real time storage and processing. The processed data can be remotely monitored. • In addition to water quality monitoring and control system, the predictive analysis of the collected data will be performed. Therefore, advanced artificial intelligence (AI) algorithms will be developed to predict water quality index (WQI) and water quality classification (WQC).

7.Title :   **Real Time River Water Quality Check**

Author: **Vaishnavi V. Daigavane**

PUBLISHED IN : "May 2017"

DESCRIPTION :   Water pollution is one of the biggest 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 low cost system for real time monitoring of the water quality in IOT(internet of things).The system consist of several sensors is used to measuring physical and chemical parameters of the water. The parameters such as temperature, PH, turbidity, flow sensor of the water can be measured. The measured values from the sensors can be processed by the core controller. The Arduino model can be used as a core controller. Finally, the sensor data can be viewed on internet using WI-FI system.

8.Title :   Real Time River Water Quality Check

Author :   NORASHANITA SHAMSUDEEN

PUBLISHED IN: "January 2021"

DESCRIPTION :   Water is a quintessential element for the survival of mankind. Its variety of uses means that it is always in a constant state of demand. The supply of water most primarily comes from large reservoirs of water such as lakes, streams, and the ocean itself. As such, it is good practice to monitor its quality to ensure it is fit for human consumption. Current water quality monitoring is often carried out in traditional labs but is time consuming and prone to inaccuracies. Therefore, this paper aims to investigate the feasibility of implementing an Arduino-based sensor system for water quality monitoring. A simple prototype consisting of a microcontroller and multiple attached sensors was employed to conduct weekly onsite tests at multiple daily intervals. It was found that the system works reliably but is reliant on human assistance and prone to data inaccuracies. The system however, provides a solid foundation for future expansion works of the same category to elevate the system to being Internet of Things (IoT) friendly.

9. Title :   River Water Quality Using Aurdino

Author :   A.Bharath Raj

PUBLISHED IN : " International Journal On 2012"

DESCRIPTION: In the contemporary ecosphere, Water contamination is one of the foremost reasons for numerous categories of water-borne viruses such as dengue, cholera and malaria etc., for hominid. 40% of deceases in universal are produced by water contaminations. So, the eminence of the drinking water wants to be restrained in real time although it is provided to customers. In this project, we propose a development and extension of a real time water eminence computing structure at compact cost using Internet of Things (IoT). To figure out the parameters of the water such as temperature, pH, turbidity. The centralised arrangement obtains the monitored standards from several devices over a period of time. Through the WiFi structure, the sensor output data is sent to the concerned authority for additional stages to advance the water quality.

10. Title :   Real Time River Water Quality Monitoring

Author   :   Sharifah Tuan

PUBLISHED IN :   "University Tuin Hussein On Malaysia On March 2020"

DESCRIPTION : Biological diversity or biodiversity is an important element in the river water management system. The interaction between the various organisms in the river makes it a very complex ecological system. Therefore, water safety issues are a very important issue. Consumer complaints and reports made by the relevant government departments indicate that consumers are dissatisfied with the quality of water supplied. Hence, a concept in which equipment, machines, sensors and devices are connected to the Internet and there is data collection and transfer through the network developed to follow the river water quality index. Integration of the elements of sustainability and IR4.0 through the Internet of Thing by adopting electronic and Internet applications of Thing has a very positive impact to refresh the approach to lesions in Malaysia. The project aims to develop a wireless water quality monitoring system that aids in continuous measurements of water conditions based on pH and turbidity measurements. The developed system was successfully detecting both the pH and turbidity values. Water analysis and monitoring is a very important aspect of water conservation and protection. Water is a vital resource that runs more quickly overtime. To ensure continued supply of safe, clean drinking water, together as community to protect and to this vital resource.