LITERATURE SURVEY

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S.NO	TITLE	PROPOSED WORK	TOOLS USED/ ALGORITHM	TECHNOLOGY	ADVANTAGES/ DISADVANTAGES
1	Water quality monitoring system	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. The sensor data can be viewed on internet using WI-FI system.	• pH sensor • Turbidity sensor • Temperature sensor • Flow sensor • Arduino model • WI-FI module	INTERNET OF THINGS	**ADVANTAGES:** • Monitoring of Turbidity, PH & Temperature of Water makes use of water detection sensor with unique advantage and existing GSM network. • The system can monitor water quality automatically, and it is low in cost and does not require people on duty. **DISADVANTAGES:** • Nowadays, water quality monitoring in real time faces challenges because of global warming limited water resources growing population, etc.

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2	IOT Based Water Quality Monitoring System	The water quality measuring system that we have implemented checks the quality of water in real time through various sensors. The microcontroller transfers the data collected by the sensors to the smart phone/PC using Wi-Fi connection. This system can keep a strict check on the pollution of the water resources and thus ensures to provide safe drinking water.	• pH • Conductivity • Temperature • Turbidity • IoT • Wi-Fi (ESP8266)	INTERNET OF THINGS	**ADVANTAGES:** • This can help in preventing several diseases that are caused due to polluted water and presence of heavy metals. **DISADVANTAGES:** • The available water resources are getting depleted and water quality is deteriorated due to the rapid increase in population and need to meet demands of human beings for agriculture, industrial, and personal use.

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3.	Water Quality Monitoring System Implemented With IoT	The paper aims to implement an intelligent water quality monitoring system with the aid of IoT. The proposed system was successfully implemented to determine the turbidity, TDS, flow rate and the level of water for a given sample. The data obtained from the sensors are uploaded to the thingSpeak dashboard for online monitoring purpose.	• IoT • Sensors • TDS • ThingSpeak • turbidity	INTERNET OF THINGS	**ADVANTAGES:** • This system can be used for both commercial and domestic purposes, Different water supply agencies. **DISADVANTAGES:** • Very Sensitive to Extreme Environmental Changes

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4.	IoT Based Real-time River Water Quality Monitoring System	This can be Proposed by a sensor-based water quality monitoring system. The main components of 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 technology. The uniqueness of our proposed paper is to obtain the water monitoring system with high frequency, high mobility, and low powered.	• pH sensor • Turbidity sensor • Temperature sensor • Wi-Fi module (ESP8266) • LCD display	INTERNET OF THINGS	**ADVANTAGES:** • Reducing water pollution and consecutively in saving aquatic life **DISADVANTAGE:** • It is difficult to collect the water samples from all the area of the water body. • The cost of analysis is very high

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5	REAL-TIME WATER QUALITY MONITORING SYSTEM	It is developed for water quality monitoring in Residential home is presented. The evaluation of prevailing environment including availability of cellular network coverage at the site of operation.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.	• Raspberry Pi • Cloud • Data Visualization • ADC • Water quality measurement sensors	INTERNET OF THINGS	**ADVANTAGES:** • Huge processing power in a compact board. • Many interfaces (HDMI, multiple USB, Ethernet, onboard Wi-Fi and Bluetooth, many GPIOs, USB powered, etc.) **DISADVANTAGES:** • Missing eMMC Internal Storage. Since the raspberry pi doesn't have any internal storage it requires a micro SD card to work as an internal storage

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6.	IoT based smart water quality monitoring system	Pollution of water is one of the main threats in recent times as drinking water is getting contaminated and polluted. If water pollution is detected in an early stage, suitable measures can be taken and critical situations can be avoided. Smart solutions for monitoring of water pollution are getting more and more significant these days with innovation in sensors, communication, and Internet of Things (IoT) technology. The developed model is tested with three water samples and the parameters are transmitted to the cloud server for further action.	• Arduino • Cloud server • Conductivity • Controller • pH • Sensors • Turbidity • Water quality	INTERNET OF THINGS	**ADVANTAGES:** • The developedmodel is cost effective and simple to use (flexible). • Use wireless communication standards for better communication and IoT to make a better system forwater quality monitoring **DISADVANTAGES:** • The existing system that the system has high complexity and low performance.

THANK YOU