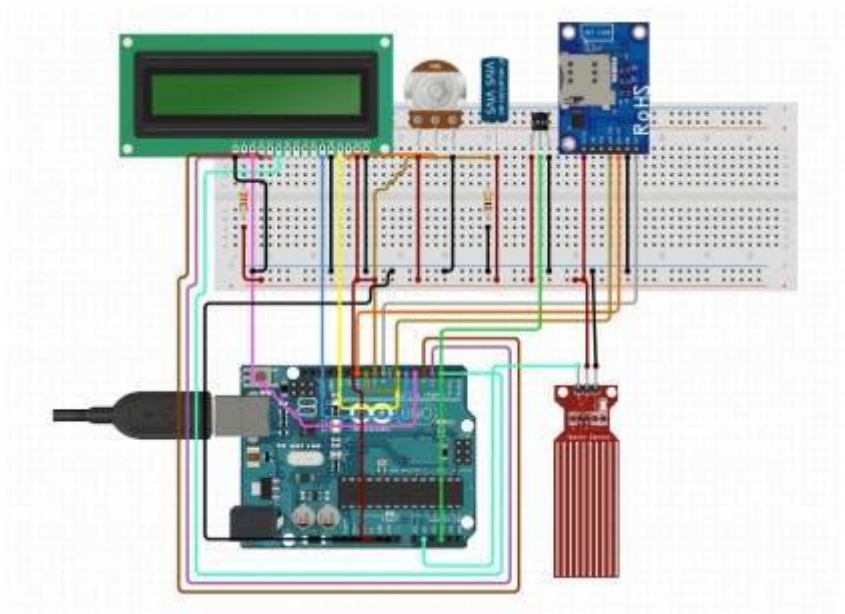
IoT Based Bridge Health Monitoring & Alerting System

This project helps in monitoring the on-time health of the bridge like vibrations, beneath water level & weight condition, temperature etc



Things used in this project

Hardware components

	Arduino UNO	× 1
	Itead Gboard Pro 800 SIM800 GSM / GPRS Module 3.3v ATmega2560 Mainboard For Arduino Starter	× 1

	DFRobot Gravity: Analog LM35 Temperature Sensor For Arduino	× 1
	water level indicator	× 1
	Vibration Sensor, SPST-NC	× 1
	Alphanumeric LCD, 16 x 2	× 1

Software apps and online services

	ThingSpeak API

Hand tools and fabrication machines

	Soldering iron (generic)
	Hot glue gun (generic)
	PCB, For DMB-4775

The aim of this project is to support the construction of an efficient HealthMonitoring System for ensuring the safety, using-life of bridges, preventing the collapse affairs, protecting people lives, environment, and reducing unnecessary finance expenses.This report presents an effective method for application on vibration, temperature, and water level signal analysis in Bridge Health Monitoring.The data collected from sensors can be transported through GSM Module to the cloud storage which is the Thingspeak cloud. The various

signals from sensors are collected through a wireless sensor network. These signals are very important in Bridge HealthMonitoring System because the variation of bridge signals indicates the changing of bridge structure state.The system working principle, hardware and software development of cloud storage has been carried in this report