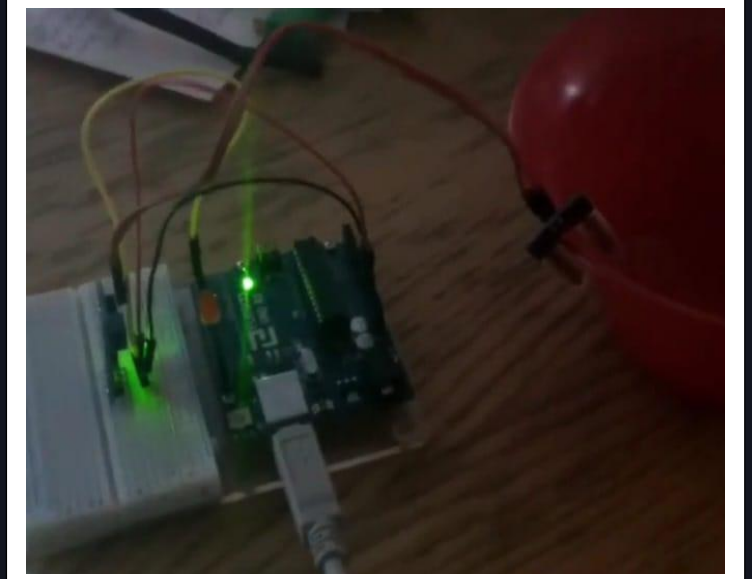


# Water Leakage Detection Using Moisture Sensors Cloud- Based Monitoring



## ABSTRACT

Water leakage in pipelines leads to water loss and property damage. This project offers a low-cost, real-time IoT-based solution using Moisture sensors and cloud monitoring.

## SYsTEM ARCHITECTURE

The system uses two Moisture sensors installed at the inlet and outlet of a pipeline.

An Arduino Uno processes the sensor data to calculate flow rates in real-time.

A Node MCU (ESP8266) module enables Wi-Fi connectivity for cloud communication.

The entire setup is built on a breadboard for easy testing and prototyping.

## WORKING

Water flows through the pipeline, both flow Moisture sensors generate pulse signals.

The Arduino calculates the flow rate from these pulses at the inlet and outlet.

It compares the two flow rates to detect any significant mismatch.

If a leak is suspected, the system triggers an alert and can activate the relay to stop water flow.

## LEAKAGE ALERT

On detecting a leak, the system sends alerts to the Thing speak cloud. An automatic relay can cut off water to prevent further damage.

Team Details: Manasa, Teja sri ,  
Gowthami, Pranaya , Srinivasa  
Reddy