



# **SANTHIRAM ENGINEERING COLLEGE**

## **(AUTONOMOUS)**

(NAAC –“A” GRADE, NBA- (ECE & CSE), Approved by AICTE, New Delhi :: Affiliated to J. N. T. University, Ananthapuram, A.P)

### **ELECTRONICS & COMMUNICATION ENGINEERING**

## **FLOOD MONITORING AND ALERTING SYSTEM USING ARDUINO IN IOT**

### **ABSTRACT**

#### **Objective: -**

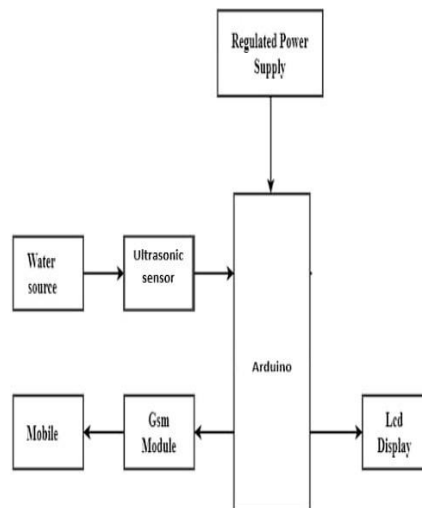
Flood warning systems have the objective of mitigating the detrimental effects of flooding and reducing the casualties and damages caused by flood disasters. These systems aim to provide early warnings to communities and authorities, allowing for timely evacuation procedures and the saving of lives and properties.

#### **Problem Statement: -**

Most of the flood monitoring techniques are based on telemetry systems which require transmitters and repeaters to relay the information to a central terminal. This approach is expensive and is not reliable when there is malfunction of equipment in some section of the sensed area.

#### **Methodology: -**

A classification framework is presented which classifies the remote sensing technologies being used for flood prediction into three types, which are: multispectral, radar, and light detection and ranging (LIDAR). Further categorization is performed based on the method used for data analysis. The suggested methodology follows a three-step assessment approach: a) annualised hazard incorporating both probabilities of occurrence and the anticipated potential damages b) vulnerability (exposure and coping capacity) in the flood-prone areas and c) annualised flood risk (estimated on annual basis). Risk assessment is a process to determine the nature and extent of such risk, by analyzing hazards and evaluating existing conditions of vulnerability that together could potentially harm exposed people, property, services, livelihoods and the environment on which they depend.



Signature of Guide

Signature of Coordinator

Signature of H.O.D