FLOOD WATER DETECTION SYSTEM

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ABTRACT

Flood is caused by natural calamities like cloud bursts, heftily ponderous rainfall, unsaturated dihydrogen monoxide flow, etc. It is unreasonable and can cause major damage to our livelihood, loss of human beings, and documents. This can be ceased earlier by utilizing the waterflood detection system. To rectify this major problem, we have developed a solution with the help of IoT and data sciences. This model is incredibly abundant helpful in observation the water level variations in varied water resources like rivers, dams, reservoirs. The water sensor technology values are monitored using soil moisture sensor and arduino as microcontroller.

Keywords*: Flood water, Arduino, Natural calamities, Safety, Prior alert.*

INTRODUCTION:

For the last few years, the entire world is facing ecumenical warming and its effects like high temperature, low rainfall, incremented sultriness, low percentage of oxygen, etc. Sometimes it rains so heavily in any season suddenly that the weather forecast cannot detect the exact reason. And due to sudden rainfall, many areas caught flood-like situations as the dam water exceeds. The dams are constructed to store a substantial quantity of dihydrogen monoxide but when the water level crosses its limit area the gates get open to preserve the dam from breakage. Many options are there to detect weather and flood situations but the system proposed here is very low cost and is very utilizable in detecting flood dihydrogen monoxide and it additionally alerts the civilians as well.

One of the effects of climate change is the formation of melted water lakes on the down sections of glaciers in the Himalayas region. Because such lakes are inherently unstable and subject to catastrophic flood surges they are potential sources of hazard to people and property in the valleys below them.

1. LITERATURE REVIEW:
1. Ponthip Limlahapun

This paper examines a satellite image processing system with a mechanism for detecting the inundated areas and fortifying flood monitoring and admonishment. The interoperable handling system is established in order to liberate access to the inundated areas with no defensive barrier to the software operability circumscriptions. The ultimate goal of this effort is to bring cognizance of the potentially catastrophic occurrence that can be pre-detected and obviated altogether.

2. Tom De Groeve

The Global Disaster Alert and Coordination System (GDACS), established in 2004, could be a cooperation framework underneath the global organization umbrella with the aim to consolidate and strengthen the network of suppliers and users of disaster info worldwide so as to supply reliable and correct alerts and impact estimations when when disasters and to boost the cooperation of international responders within the immediate aftermath of major natural, technological and environmental disasters.

3. C.K. Gomathy

Over the past few years, we are able to see there's been an incident of floods in several elements of   the planet virtually each year. The technical advancements in recent years have created it easier to induce an answer for these natural disasters. One of such technologies that take the North American nation abundant nearer to the net is the "Internet of Things". This paper consists of flood detection and shunning system mistreatment IoT technology.

The sensors gift during this are to estimate the water levels, humidity, and temperature and send the time period information to the cloud and also the users will access the information via the mobile app. This model is wide wont to alarm the individuals before a flood happens and necessary precautions might be taken.

4. Minakshi Roy

since we are now currently present in an era of Computing Technology, it is essential for everyone and everything to be connected to the cyber world. IoT is a technology that brings us more and more proximate to this goal. Our project comprises a perspicacious dihydrogen monoxide monitoring system which is a minute archetype for flood detection and avoidance system. This paper expounds on the working and the workflow of all the components present in our project.

The data are uploaded and transmuted in the cloud in precision to the sensor and genuine-time transmutations in the mobile application are achieved. This model can be acclimated to greatly abbreviate the casualties in a devastating event of a flood.

5. Gonzalo Javier Olivares

The following paper explicates an incipient methodology for an early warning system for rain events at a campsite over the Pyrenees in Lleida in the Northeast of Spain. The typology of rainfall events is prominent in this component of the Pyrenees. They are mundane events with high intensity and short duration and are mainly distributed over summer and springtime.

Most of the campsites of the zone are located in the juxtaposition of the rivers; ergo, many of them are subjected to a high probability to suffer damage under cumbersomely hefty rain events and the consequent floods.

2. RESEARCH METHODOLOGY:

Existing System:

 The quandary in disaster management is not a lack of technology or subsistence of the pertinent information. It is often the lack of accessibility of the information. The capability to efficiently use information technologies to discover and manage information, and the facility to critically evaluate, and opportunely apply such information to solve a quandary, are the key spirit of investigation and tenaciousness to ascertain disaster recuperation solutions. Consequently, the expedient of identifying, locating, accessing data, and determining is crucial for carrying out efficiently responding to the quandary. The Cyber World technology accommodation is broadly perceived as a method for distributing information. It is accommodated as two-way communication between accommodation providers and users. As a result, a sizably voluminous number of web-predicated applications and accommodations including web-mapping accommodations have been incrementing.

Proposed System:

Flood detecting notification by using wireless sensor networks is to detect the flood in advance. In this system, two significant things include hardware design and software development. The hardware part is very important for the system that can be able to control the whole system and the transmitter and receiver Module that are used in the wireless purpose for sending and receiving the signal.

Flood detection system is containing six main components:

● Water level sensor ● Arduino ● Relay ● Buzzer ● Motor Pump ● Water Level Sensor ● Batter

STEP 1: Start

STEP 2: Check for first Condition If water level is Low then Green light will blow, else check for next level.

STEP 3: Check for the next condition, if the water level is Medium, then Yellow light will blow, else check for next level.

STEP 4: Here is the next condition, if the water level is high then Red light will blow.

STEP 5: After Blowing Red LED buzzer play.

STEP 6: Then the Relay controller starts the motor pump that takes out access water. STEP 7: Stop Process.
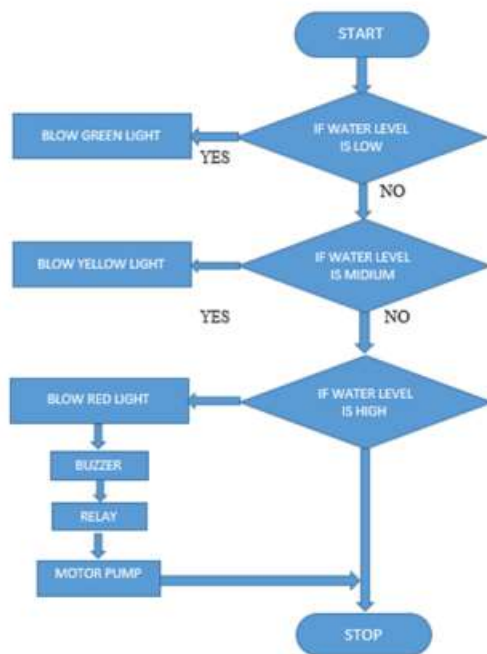

Fig. 1 Flow Diagram

3. CONCLUSION:

In this system, we are using two techniques to send the data via alert buzzer to the controller and the public. The first technique; Alert buzzer for sending the alert to the controller and citizen. The second technique will relay controller start the motor pump which will take out water from it

4. REFERENCES:

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