

# Early Flood Warning System

Charles Chiwandira<sup>1</sup> and Joel Mulepa<sup>2</sup>

Student, Bachelor of Computer Science Engineering, DMI St John The Baptist University, Lilongwe, Malawi<sup>1</sup>

Supervisor, Bachelor of Computer Science Engineering, DMI St John The Baptist University, Lilongwe, Malawi<sup>2</sup>

**Abstract:** *The human are still not able to battle the natural calamities besides huge development in technologies. The fact is that the natural calamities can neither be abolished nor be prevented. But the technology has been developed gigantically in order to prevent loss of life. This project is totally based on informing the civilians about the upcoming flood so that they can evacuate the danger area before the flood hits. For detecting the rise in water level Ultrasonic Sensor and Water Level Sensor is used. For detecting the change in humidity and temperature Humidity and Temperature Sensor is used. The data from the DTH11 and HC-SR04 is read by the microcomputer and analyze the data in order to detect the level of water. If the level of water is less than the defined threshold value then the microcomputer turns the LED and buzzer on. Furthermore, the data obtained from the microcomputer is uploaded to the database. The values of the sensors updating in real time can be monitored in database table. The content of the database table is now linked with the web API (Application Programming Interface) and trigger is set. And now when the level of water crosses the threshold value the trigger is triggered and the web API sends the SMS to the phone number registered to it*

**Keywords:** Flood Management, Early Warning System, Ultrasonic Sensor, Water Level Sensor, Humidity Sensor, Temperature Sensor, Microcomputer, Database, Web API, SMS Notification