

# Real-Time Flood Monitoring System Using Raspberry PI

## **Abstract**

Flood has been a major concern for a very long time and the inability to monitor it in real-time has been a major disadvantage in maintaining a healthy hydrologic process. The main problem in monitoring flood is the amount of time taken for data to reach users and how long the data is relevant for as in monitoring flood, timing is the crucial key. This research proposes a Real-Time Flood Monitoring System that can aid in monitoring flood more efficiently. The system utilizes a set of sensors connected to a single-board computer that determines values in which is vital in monitoring flood. To ensure a fast transmission of data, the values are transferred over Wide Area Network (WAN) to host these values on a remote server. The remote server hosts these data on a website and application which is made accessible for the public with an ease of access. As a result, it can be viewed by users who wish to know the necessary values in determining danger level and further actions can be taken in ensuring their safety. Data which is transferred on real-time allow less time to be taken in order for the news to spread around as time is very crucial in saving people from natural disasters. These data also have a great importance for safety enforcement to be used in determining safety precautions that can be taken in order to ensure the safety of people around a particular area.