ABSTRACT

Early flood detection and avoidance are critical for preventing the loss of life and property caused by floods. IoT (Internet of Things) technology has the potential to improve early flood detection and avoidance by enabling real-time monitoring of water levels and weather conditions in and around dams.In this context, the use of IoT sensors in dam infrastructure allows continuous monitoring of water levels, rainfall, and other relevant data, which can be used to detect early signs of potential flooding. By leveraging this data, automated systems can send alerts and warnings to officials and residents in nearby areas, giving them time to prepare and evacuate if necessary.IoT technology can also be used to automate the dam's floodgates and other control mechanisms, allowing for more efficient and timely responses to changing water levels. Additionally, data from IoT sensors can be used to optimize the dam's operations, improving water management and reducing the risk of flooding.To implement an IoT-based flood detection and avoidance system, a network of sensors must be deployed throughout the dam and its surrounding area. These sensors must be capable of collecting and transmitting data in real-time, and the system must be able to process and analyze this data quickly to identify potential flood risks.

Keywords - Level, Water, IoT, Monitoring, ESP-32, Ultrasonic Sensor

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