IOT Based Flood Monitoring System

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Abstract*: The rapid advancements in Internet of Things (IoT) technology have paved the way for innovative solutions in disaster management, particularly in flood monitoring and response. This paper presents an IoT-based flood monitoring system designed to provide real-time data on water levels, rainfall, and environmental conditions to predict and manage flood risks effectively. The system utilizes a network of sensors placed at strategic locations along water bodies to continuously collect data, which is then transmitted to a central server via wireless communication protocols. The data is analyzed using machine learning algorithms to forecast potential flood events and provide early warnings to authorities and residents. The system also includes a user-friendly interface for accessing real-time updates and historical data trends. This approach aims to enhance the accuracy of flood predictions, reduce response times, and ultimately mitigate the impact of floods on communities.*

Keywords: Internet of Things (IoT) Flood Monitoring Disaster Management Real-time Data Machine Learning