

A Multi-Hazard Weather and Disaster Prediction Mobile Application

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Abstract: *The present work details the development of a mobile application that includes real-time weather forecasts, climate trend information, and multi-hazard disaster forecasting for earthquakes, tsunamis, and flooding– all presented via an interactive map interface. The application allows users to sign in, use custom settings, and search any place on Earth to view the current weather and multi-day hazards. The user app provides early warning features to enhance community resiliency. This application positively contributed through the consolidation of meteorological and geophysical data, interactive mapping services, and secured access for users. A prototype was tested to conduct an evaluation for user testing and testing for accuracy across the back-end models. The results of data collected indicate that users were extremely satisfied with the experience, and the accuracy of data predictions via climate trends for disaster and multiple types of hazard phenomena exceeds and is comparable to stand-alone environmental hazard predictions. We will argue that this application can positively advance readiness and response in disaster behaviors.*

Keywords: *mobile application*

