SAN DIEGO STATE UNIVERSITY
Leadership Starts Here

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Rapid Decision Tool to Predict Earthquake Destruction in Sumatra

Using First Motion Survey

Abstract

The main idea of this project is to build an interactive and smart Geographic Information system tool which can help predict intensity of real time earthquakes in Sumatra Island of Indonesia. The tool has an underlying intelligence to predict the intensity of an earthquake depending on analysis of similar earthquakes in the past in that specific region. Whenever an earthquake takes place in Sumatra, a First Motion Survey is conducted; this decides its type, depth, latitude and longitude. When user inputs this information into the input string, the tool will try to find similar earthquakes with similar First Motion Survey and depth. It will do a survey of similar earthquakes and predict if this real time earthquake can be disastrous or not.

This tool has been developed in JAVA. I have used MOJO (Map Objects Java Objects) to show map of Indonesia and earthquake locations in form of points. ESRI has created MOJO which is a set of JAVA API's. The Indonesia map, earthquake location points and its co-relation was all designed using MOJO.

This tool is easy to use, and the user has to input some parameters for the end result. I hope this tool justifies its use in prediction of earthquakes and help save lives in Sumatra.

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