

Team: Tremors

Members: Francisco Gonzalez
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CS 491/DES 400 Project 2

Description

Our project idea is to use Earthquake data to display earthquakes on a map. The application uses the latitude and longitude information from each earthquake and scales it to the map so that an earthquake can be drawn on the map at the place of occurrence. Using different shades of red, we color the earthquakes to represent their magnitude. The ranges of magnitude are based on the richter scale. The project includes a legend on the bottom-right of the map to easily identify the magnitude of an earthquake based on its color.

We requested an API key to use google maps, on which we drew the earthquakes. Initially the map will be zoomed out and centered on Chicago, but the map can be zoomed in by double clicking or using a mouse scroll.

Upon hovering over an earthquake, it will change to the color blue to indicate which earthquake is in focus, and an animated div will fade in the upper right of the map and provide information about the earthquake. The information provided includes: time, magnitude, type, and location.

The title and the legend have absolute positions so that they do not move when the map is zoomed in. The map can be viewed in two modes : Terrain (Map) and Satellite mode that can be selected through the tabs at the top left side of the screen.

Project Inspiration and Applications

There are lot of tremors occurring every month around the world that are not covered by the media, but still impact local residents. It would be helpful for the residents to check the tremors occurring around their neighbourhood in the recent month. For example, there have been many mild earthquakes in Oklahoma in recent years. This is an unusual area for seismic activity, which has been attributed to fracking wastewater. A visualization of the earthquakes could be used as an argument against fracking, or alert travelers to areas of increased earthquake activity. Analysis of the visualization could help identify patterns to forecast the likelihood of future earthquakes.

The Information provided at <https://developers.google.com/maps/documentation/javascript/> and <http://earthquake.usgs.gov/earthquakes/feed/> helped in developing this project. Additionally, we modeled our project after <http://bl.ocks.org/mbostock/899711>

Dataset Source

The U.S. Geological Survey provides live data that is updated every 15 minutes.
http://earthquake.usgs.gov/earthquakes/feed/v1.0/summary/all_month.geojson

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Task Allocation

Alex (Designer) Tasks included creating the legend and color scheme used and the project as well as layout of the map.

Malvika (CS) Tasks included using magnitude information to conditionally color the earthquakes and earthquake animation.

Francisco (CS) Tasks included processing the json data to draw earthquakes and include earthquake information on mouseover interaction.

Project Link

<http://fgonza21.people.uic.edu/>