

1. Working Demo: The following MATLAB plots demonstrate a successful working demo.

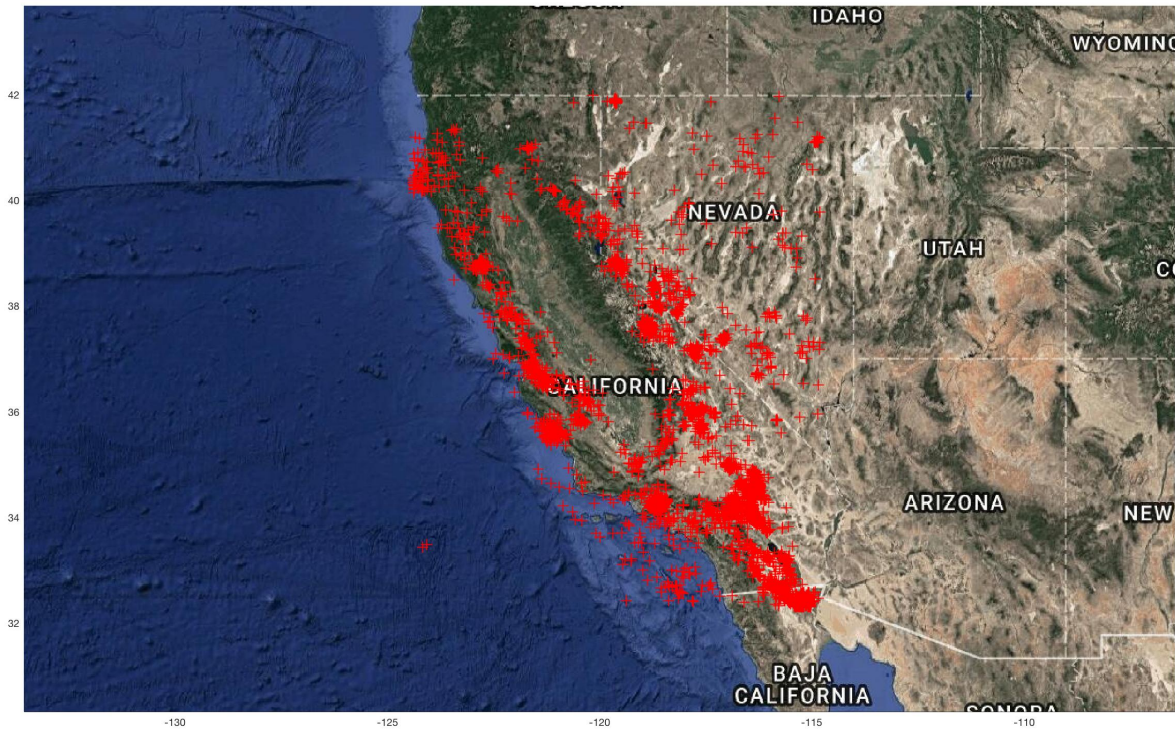


Figure 1. Earthquake locations in California

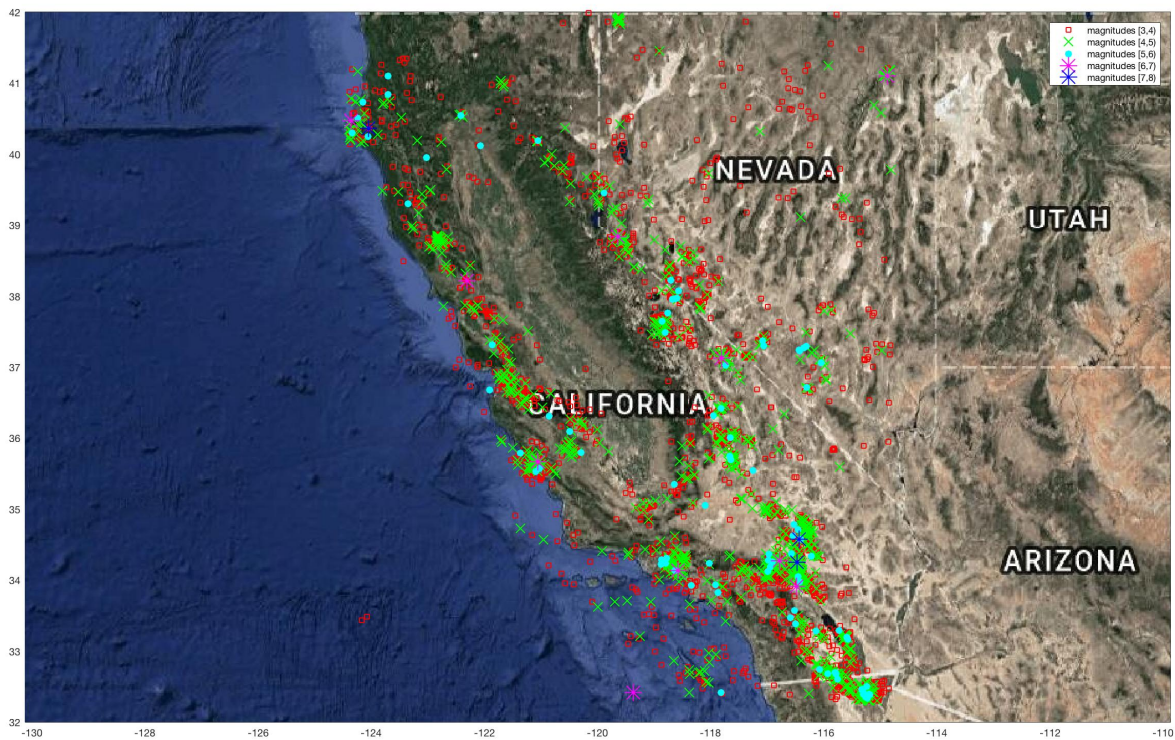


Figure 2. Earthquake locations in California with magnitude coloring

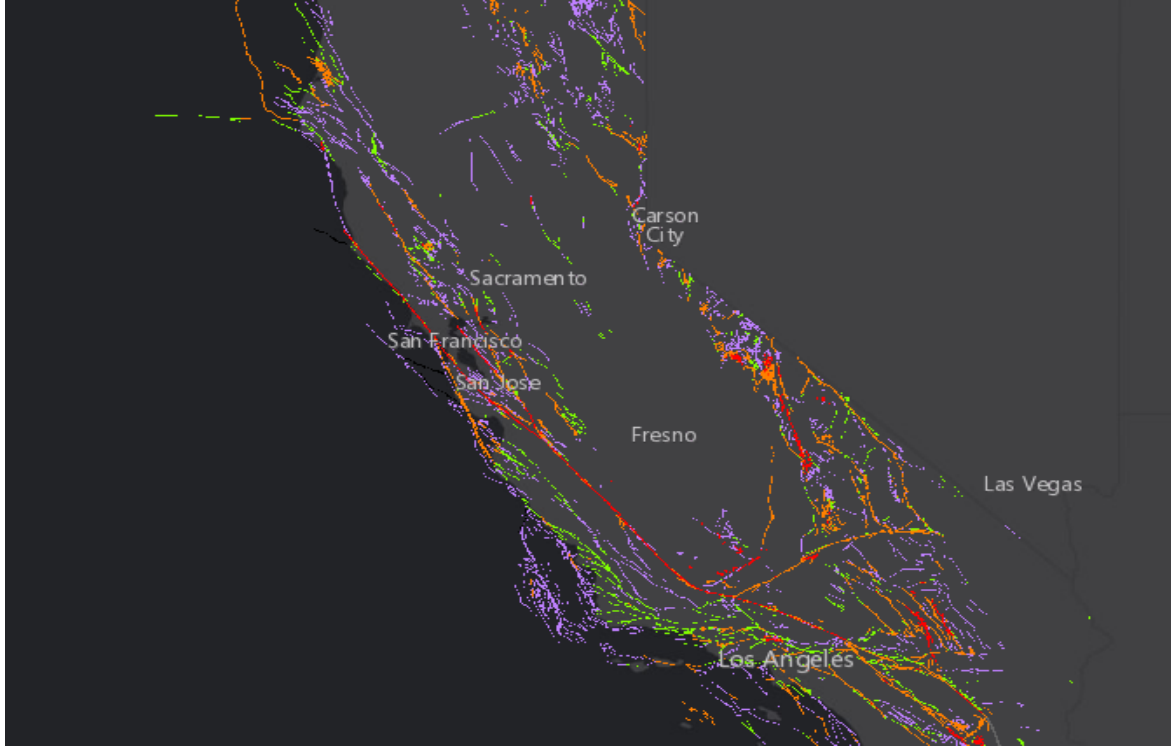


Figure 3. Fault Map of California

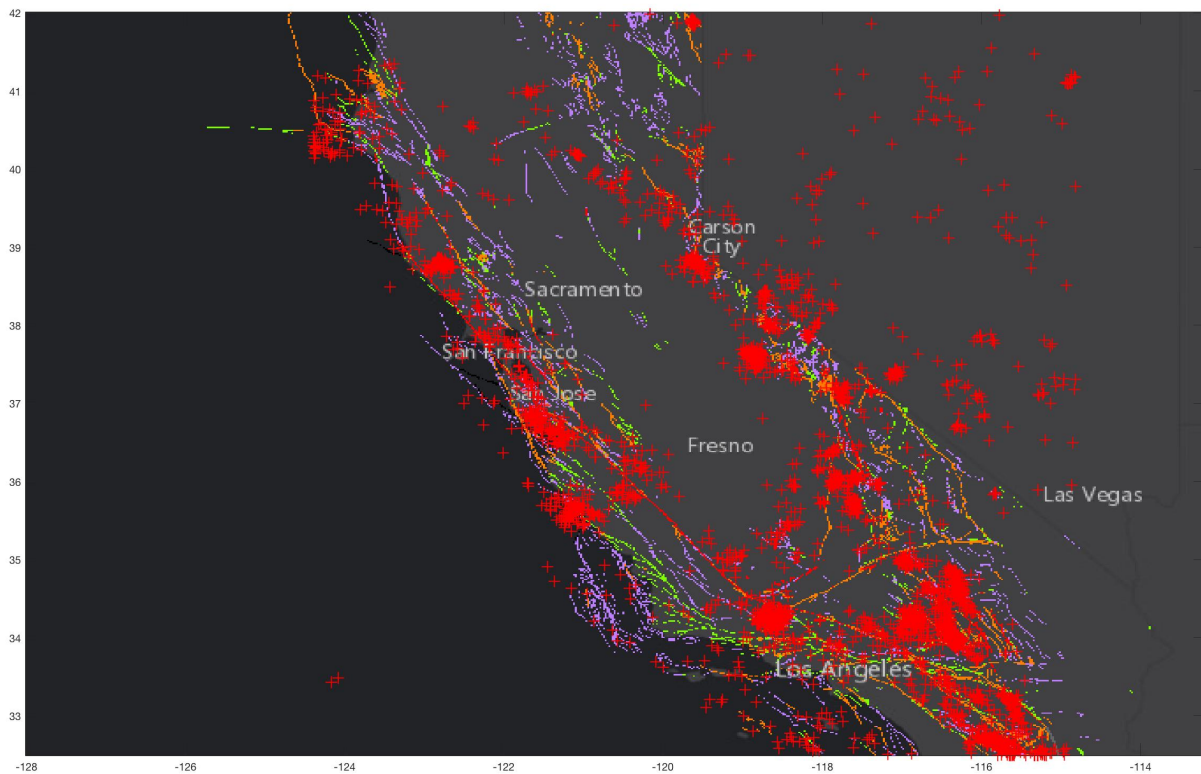


Figure 4. Earthquake locations over California's Fault map

## 2. Timeline:

1. Studying the data from the IRIS repository, extracting relevant data for the study and putting needed data in MATLAB's format. **(27 hours)**
2. Reading the following references to see what other people have tested and come up with. It's a useful exercise to generate new ideas. **(18 hours)**
  - H Adeli, A Panakkat, A probabilistic neural network for earthquake magnitude prediction, Neural Networks, 2009 Elsevier.
  - CK Oh, JL Beck, M Yamada, Bayesian learning using automatic relevance determination prior with an application to earthquake early warning, Journal of engineering mechanics, 2008.
  - A. Alimoradi, JL Beck, Machine-Learning Methods for Earthquake Ground Motion Analysis and Simulation, Journal of Engineering Mechanics, 2015
3. Understanding the functionalities and the usage of MATLAB's Mapping Toolbox and how to use google maps in MATLAB. **(7 hours)**
4. Plotting Earthquake data in MATLAB, creating a time series video of earthquake events in MATLAB along with classification of earthquakes by magnitudes. **(3 hours)**
5. Getting California's fault data and putting them in a figure, then plotting Earthquake locations over California's Fault map. **(4 hours)**