Team: Outstanding Owls
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Work Plan

Introduction

Displayed on the Icelandic Meteorological Office (IMO) site is a real-time dataset derived from the SIL Seismic Network that detects and locates earthquakes in Iceland (IMO 2016). This dataset contains information regarding Icelandic earthquakes during the last 48 hours and is updated every five minutes. The Outstanding Owls will be using web crawler to monitor the data and aggregate all the data into a single dataset. The first two columns in the dataset represent the date and time (GMT) of the earthquake. Columns 3 and 4 denote the location of the epicenter. The next two columns focus on the earthquakes depth and magnitude. Column 7 measures earthquake detection quality and finally column 8 provides details on the location of the epicenter from a nearby town, mountain, or volcano.

Research Questions

- What is the statistical relationship between magnitude and depth?
- Which locations are experiencing increased seismic activity?
- Is there a spatial pattern in which the increased earthquake activity occurs?

Project Effort Allocation

The Outstanding Owls agreed that every individual will work on the data cleaning, data documentation, and final presendation. However, Mary Kendig will develop the Draft R Script while Neeraj and Namrata will develop the Draft R Plot Scripts. The git package will be updated by the individuals working on their respective parts.

Target Audience

The primary target audience for this project is Icelanders living in the south. In 2010, the volcano Eyjafjallajökull erupted and produced an immense ash cloud. As strong gales pushed the ash cloud west, farms were destroyed by ash and farmer animals died. There is another active southern volcano larger than Eyjafjallajökull so southern residents must be prepared for its eruption.

The secondary target audience is geologists, volcanologists, and oceanographers. The dataset provides information on earthquake and volcano behavior that scientists can use to study eruptions. Furthermore, it provides glimpses into Earth's tectonic plates and internal activities. This data is not just applicable to Icelandic geologists, but all geologists and earth science disciplines.

The third target audience is policy makers. Using the data and studies developed by scientists, governments and emergency organizations can better prepare for eruptions close to populated areas. While Iceland is specifically remote, the magnitude and earthquake depth preceding an eruption could be compared to volcanoes in other regions or along other plates.

Data Citation:

Icelandic Metrological Office (2016). Whole country – earthquakes during the last 48 hours [Dataset]. Date accessed September 14, 2016. Retrieved from http://en.vedur.is/earthquakes-and-volcanism/earthquakes#view=table

Planned Timeline

Task	Start Date	Duration(Days)
Work Plan	10/2/2016	3
Data Cleaning	10/7/2016	25
Progress Meeting	11/3/2016	1
Draft R Script	11/3/2016	14
Draft R Plot	11/17/2016	14
Project Presentation	12/1/2016	14
Git Repository	12/1/2016	14

Gantt Chart

Word Count: 481