Team: Outstanding Owls
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Work Plan

Introduction

The dataset displayed on the Icelandic Meteorological Office (IMO) site is near-real-time data derived from the SIL seismic network that detects and locates earthquakes in Iceland. The dataset contains data about the earthquakes during the last 48 hours and is updated every five minutes. We will be using web crawler to monitor the data and aggregate all the data into a single dataset. The first two columns in the the dataset represent the date and time (GMT) of the earthquake. Columns 3 and 4 denote the location of the epicentre. The next two columns focuses on the depth and magnitude of the earthquake. Column 7 is the measure of earthquake quality and finally column 8 provides details on the location of the epicentre from a nearby location.

Research Questions

- What is the statistical relationship between frequency, magnitude, and depth?
- Which data predicts the likeliness of a volcanic eruption? Can we use this data to predict Katla's eruption?
- Is there a pattern in which the earthquakes occur?
- Is there a possibility of predicting an earthquake with higher magnitude in any particular region?

Project Effort Allocation

The Outstanding Owls agreed that every individual will work on each assignment and document their processes and methodology. However, prior to submission, the team will meet, share their work, and then create an official document and process for the data.

The final presentation and paper will be divided by interest and background.

Target Audience

The primary target audience for this project are Icelandic/European citizens and airports. In 2010, the volcano Eyjafjallajökull erupted and produced an immense ash cloud. As strong gales pushed the ash cloud west towards Europe, air traffic was shut down and planes were stranded in Europe. This brief period of inactivity impacted the economy as food and goods were unable to travel. Katla is larger than Eyjafjallajökull so there is much concern with its imminent eruption.

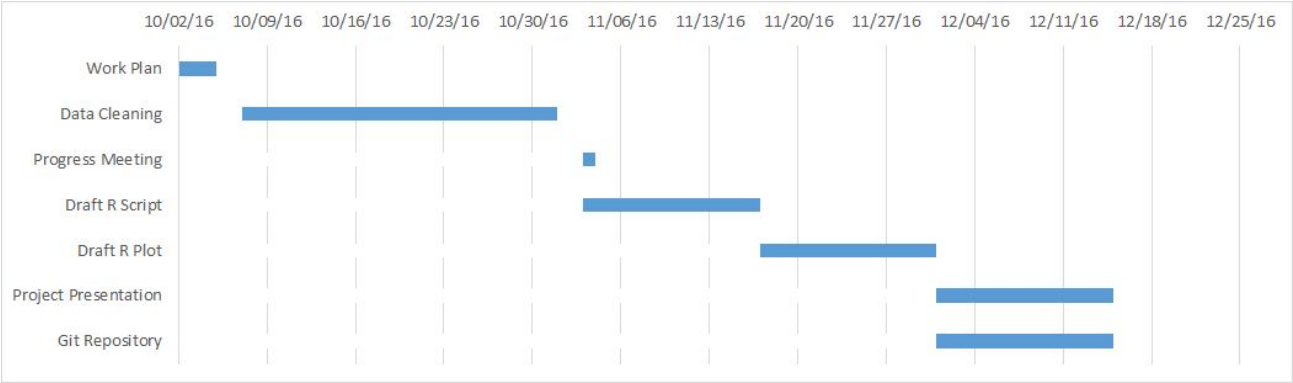
The secondary target audience are geologists, volcanologists, and oceanographers. The data recorded in Iceland provides information on earthquake and volcano behavior that scientists can use to study eruptions. Furthermore, it provides a glimpse into Earth's tectonic plates and internal activities. This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

The third target audience are 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.

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