**Background and Motivation**

The multiple crises surrounding the 2011 Japan Tōhoku earthquake, tsunami and subsequent Fukushima nuclear disaster created the most costly natural disaster in history. With over 15,000 lives lost, nearly as many injuries, some 300,000 displaced residents, the destruction of major coastal areas, and a nuclear disaster only equaled by Chernobyl, Japan’s Triple Disaster remains at the forefront of global conscience with consequences that will last generations.

Having recently marked its third anniversary, there exists a vast expanse of information about the disaster, its effects, and the global relief effort.

**Project Objectives**

Our project is a memoriam of Japan’s Triple Disaster, commonly remembered by the Fukushima Daiichi nuclear disaster. Our website and visualization(s) will answer questions about those affected by the disaster; what was the human toll of the disaster?

We will gather polling data through a Japanese statistician contractor and visualize the thoughts and feelings of those involved in the catastrophe. We will visualize the economic impact that the disaster has had on Japan, potentially including relief funding and other donations. We might additionally visualize data pertaining to the residents displaced, deaths, flood maps, nuclear repercussions, and etc. Data can be classified by age, gender, prefecture, education level, and etc.

**Data**

[National Geophysical Data Center](http://www.ngdc.noaa.gov/hazard/honshu_11mar2011.shtml)

[Death and Damage Data](http://www.npa.go.jp/archive/keibi/biki/higaijokyo_e.pdf)

[Earthquake report (USGS)](http://earthquake.usgs.gov/earthquakes/eqinthenews/2011/usc0001xgp/#details)

[Japanese Red Cross](http://www.jrc.or.jp/eq-japan2011/index.html) (private donations)

[Brookings Institute: Economic Figures](http://www.brookings.edu/~/media/research/files/reports/2012/3/natural%20disaster%20review%20ferris/03_natural_disaster_review_ferris.pdf), [(2)](http://www.brookings.edu/research/opinions/2011/03/22-japan-leadership-ferris), [(3)](http://www.brookings.edu/blogs/up-front/posts/2013/03/11-japan-earthquake-ferris-solis)

[OECD Report](http://www.oecd.org/japan/thetohokupacificearthquakeeconomicconsequences.htm), [(2)](http://ffj.ehess.fr/index/article/283/the-economic-impact-of-the-tohoku-earthquake.html)

**Data Processing**

There shouldn’t be too much data clean up, as most of the figures have already been processed by the Japanese government and media outlets.

The social media data will have to be cleaned to process the geographic information embedded in the information, and we will do data processing using Python and/or statistical software such as SAS / Stata.

**Visualization**

We plan to represent our data in a single-page, interactive website. The visualization will flow as the user scrolls to show various components of the disaster in a logical progression.

Sketches are included in proposal.pdf. We expect our final visualizations to evolve over the coming weeks and will likely dramatically differ from these rough sketches.

**Must-Have Features**

The primary “must-have” feature of this project is the ability to effectively communicate the impact of the devastation that has occurred socially, politically and economically. By better comprehending the events surrounding Japan’s Triple Disaster, the Japanese can understand how best to move forward.

Supporting features include an interactive map showing the various geographic data associated with the Triple Disaster (tsunami wave height, seismic activity, number of people displaced, cesium (radiation) measurements, and/or etc.).

Similarly, we should have a representation of the lives affected by the disaster. We should have an interactive feature showing the number of people missing / confirmed dead from the disaster. We should also show displacement data and the progression of the government instated evacuation zone.

**Optional Features**

The scope of our project can indeed become very large. There are many optional features which we could consider, such as including radiation measurements taken from the Pacific Ocean since the Fukushima nuclear disaster occurred. However, since our main focus is to communicate the overall impact of Japan’s Triple Disaster to help the Japanese understand their future, and because our time is limited, we will limit its scope to include only the most impactful visualizations and/or features.

**Project Schedule**

3/22: Data sources finalized, with exception of possible polling data.

3/29: Some sourced data analyzed. More visualization inspiration review. Vague idea how best to visualize data.

4/5: Most sourced data analyzed. More visualization inspiration review. Better idea how best to visualize data.

4/12: Possible polling data obtained. Most sourced data analyzed. More visualization inspiration review. Strong idea how best to visualize data. Visualization programming begins.

4/19: 50% programmed. Further visualization improvements.

4/26: 100% programmed.

5/1: 110% amazing.