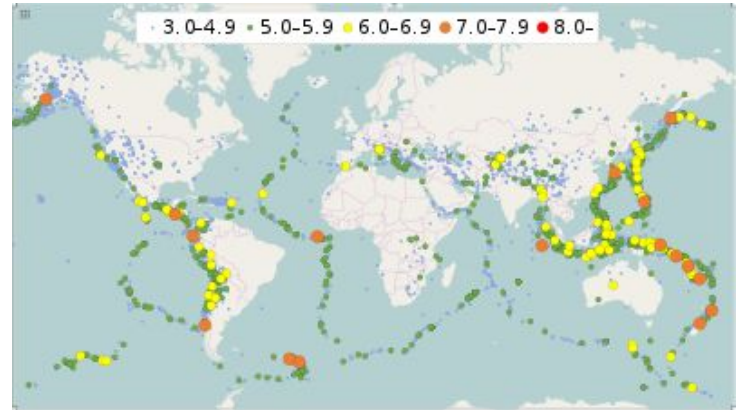# Predicting Earthquake Damage

Goals

Provide a tool that can quickly estimate the damage caused by an earthquake based on the magnitude of the earthquake, proximity to the population source and other yet to be determined factors.

Quickly gauge how much money is required to rebuild

2016 Earthquakes > M3

Potential Audience

- Insurers

- Governments

Target:

- Predict the physical losses caused by an earthquake in $$$

Model type:

- Regression

Success Metrics:

R^2 , MSE

Significant Earthquake Search - sorted by Date

6071 Significant Earthquakes where all records returned

View parameter descriptions and statistical information by clicking on **column headings**.

For additional information about an earthquake event and links to damage photos, click on the links in the **Addl Info** and **Tsu** columns.

Date						Assoc		Addl EQ Info	Earthquake Location			Earthquake Parameters			Earthquake Effects								
															Deaths		Injuries		Damage		Houses Destroyed		Houses Damaged	
Year	Mo	Dy	Hr	Mn	Sec	Tsu	Vol		Name	Latitude	Longitude	Focal Depth	Mag	MMI Int	Num	De	Num	De	$Mill	De	Num	De	Num	De
-2150								*	JORDAN: BAB-A-DARAA,AL-KARAK	31.100	35.500		7.3							3				
-2000						Tsu		*	SYRIA: UGARIT	35.683	35.800			10		3								
-2000								*	TURKMENISTAN: W	38.000	58.200	18	7.1	10	1	1				1		1		
-1610						Tsu	Vol	*	GREECE: THERA ISLAND (SANTORINI)	36.400	25.400													
-1566								*	ISRAEL: ARIHA (JERICHO)	31.500	35.300			10						3				
-1450								*	ITALY: LACUS CIMINI	35.500	25.500			10										

Data Sources

https://www.kaggle.com/usgs/earthquake-database - 23k earthquakes x 21 columns

https://www.ngdc.noaa.gov/nndc/struts/results - 6071 significant earthquakes, 25 columns

How does a bad review affect an Airbnb listings occupancy rate?

Goals

Sentiment/NLP Analysis of Airbnb reviews and how occupancy rates are affected

Potential Audience

- Airbnb

  Changes to star rating system

- Airbnb Hosts

  Pricing level

"Although I have rented..."

◎◎◎○○ Reviewed October 5, 2010 for a stay in October 2010

Although I have rented this property several times, it seems to have fallen into some disrepair. The carpet was dirty and staind. The garage door was broken. Towel racks in...

More ▼

Management response:
Thank you for your feedback Brandon. I am sorry that the home was not up to the standards that you have previously enjoyed. We have made notes of your concerns... more

Target:

- Occupancy Rate

Model type:

- Regression or Classification of occupancy bands

Success Metrics:

- R^2 , MCE
- Accuracy/ Recall

PEOPLE + PLACES + LOVE + AIRBNB

Data Sources

- CSV data supplied by Airbnb for every listing.
- 26,295 listings with 403,567 total reviews for berlin alone.

id	listing_url	scrape_id	last_scraped	name	summary
2015	https://www.airbnb.com/rooms/2015	20181107122246	2018-11-07	Berlin-Mitte Value! Quiet courtyard/very central	Great location! 3
2695	https://www.airbnb.com/rooms/2695	20181107122246	2018-11-07	Prenzlauer Berg close to Mauerpark	
3176	https://www.airbnb.com/rooms/3176	20181107122246	2018-11-07	Fabulous Flat in great Location	This beautiful first
3309	https://www.airbnb.com/rooms/3309	20181107122246	2018-11-07	BerlinSpot Schöneberg near KaDeWe	First of all: I prefe

reviews

listing_id	id	date	reviewer_id	reviewer_name	comments
2818	1191	2009-03-30	10952	Lam	Daniel is really cool. The place was nice and clean. Very quiet neighborhood. He had maps and a lonely planet guide book in the room for you to use. I didnt have any trouble findi
2818	1771	2009-04-24	12798	Alice	Daniel is the most amazing host! His place is extremely clean, and he provides everything you could possibly want (comfy bed, guidebooks & maps, mini-fridge, towels, even toile
2818	1989	2009-05-03	11869	Natalja	We had such a great time in Amsterdam. Daniel is an excellent host! Very friendly and everytime helpful. The room was cozy, comfortable, and VERY clean. Maps, towels, mini-frid Totally recommendable!
2818	2797	2009-05-18	14064	Enrique	Very professional operation. Room is very clean and comfortable. Location is close to tram or bus which take you to most of attractions. A great and helpful host who want to ensu
2818	3151	2009-05-25	17977	Sherwin	Daniel is highly recommended. He provided all necessities (and actually went way beyond what's expected of a great host). His place is very clean. It is also convenient to buses
2818	4748	2009-06-29	20192	Jie	Daniel was a great host! He made everything so easy for us! The room was super clean and well equipped, the beds were very comfortable! Daniel also gave us good advices, tip
2818	5202	2009-07-07	23055	Vanessa	Daniele is an amazing host! He provided everything that was needed to make our stay comfortable and easy! The rooms were clean and cozy; and he took the time to show us ho