Exploration of Empirical Model (Alternative to MDA)

By The Quakers

What we've been working on

- First, we threw out all earthquakes with < 3 magnitude
  - Decision based on USGS classifications. Anything < 3 rarely even felt; unlikely to cause any damage
- Existential crisis: Will the model predict anything useful if we have to wait for main event?
  - Researched foreshocks: ~70% of major earthquakes preceded by a foreshock

What we produced...

https://github.com/SunnySunnia/TheQuakers/tree/master/Quantile-Method

What next?

- Either continue with empirical model or return to improving MDA model
- See what progress other groups have made with MDA

Questions

1. How does professor Luen vary tau for MDA?
2. Is it okay to compare error integrals of different taus?
3. Does our computation of tau make sense? Where the denominator is the window time and the numerator is the window size?
4. Does the ECDF error plot make sense?
5. How many aftershocks should we be looking at? We only looked at the first ones.

Further Information

- Where you can find our code.
  - https://github.com/SunnySunnia/TheQuakers/tree/master/Quantile-Method
- Where can you find our data.
  - https://www.dropbox.com/s/tzx4qqxhh9u9iz2/DataFrame.csv

Sync-up

- Progress so far among the analyzers?
  - Have any groups made progress with MDA or any other models?
  - https://github.com/stat157/analyzers/issues/5