

Earthquake Early Warning Model using Signal Analysis and Machine Learning

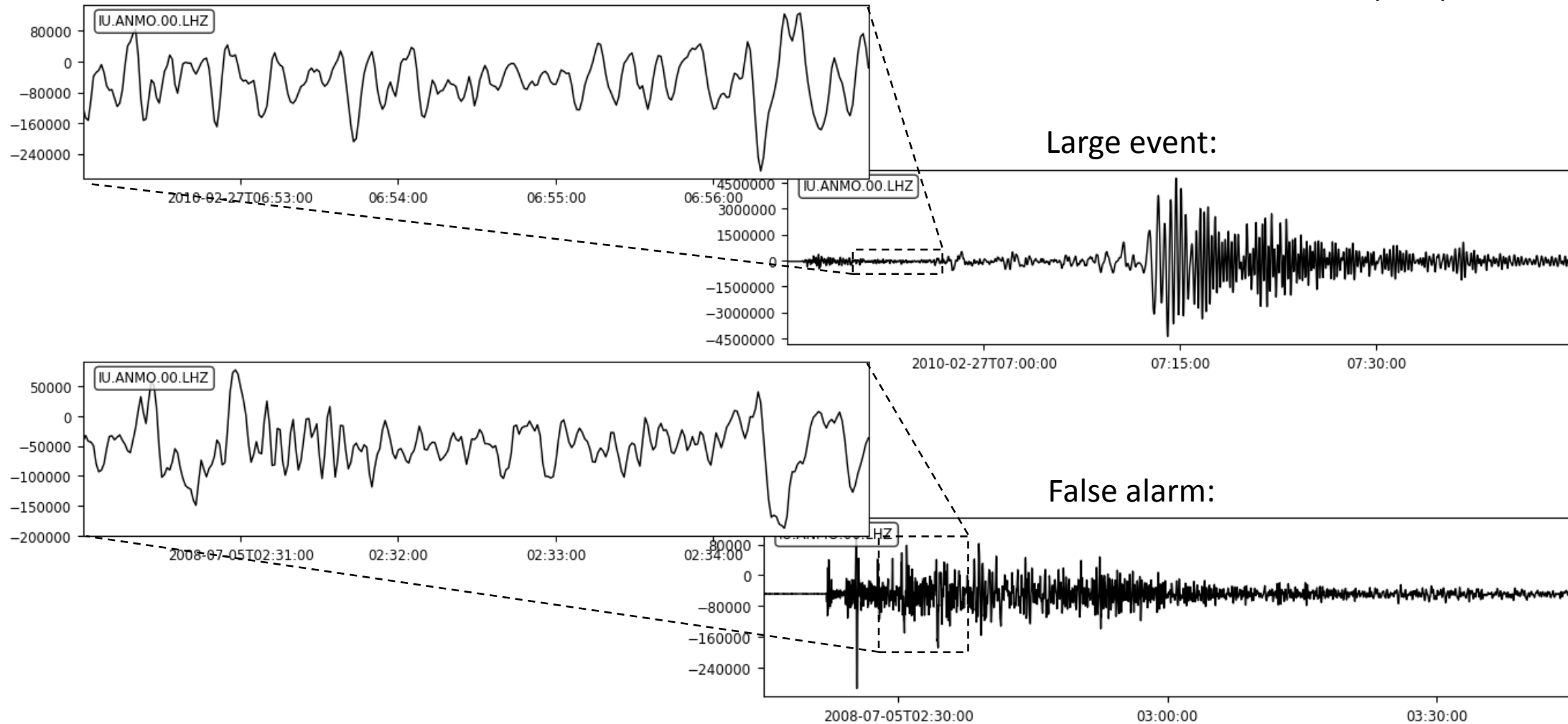
Week 4

The Data Incubator

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Seismic Waveforms

Data source: Global Seismic Network, Station IU ANMO
Albuquerque, New Mexico, USA



With only the first few minutes of a seismogram data:

- How big will the seismic event will get?
- How long the seismic event will last?

Project Goal: provide a few minutes of early warning before seismic events reach their maximum.

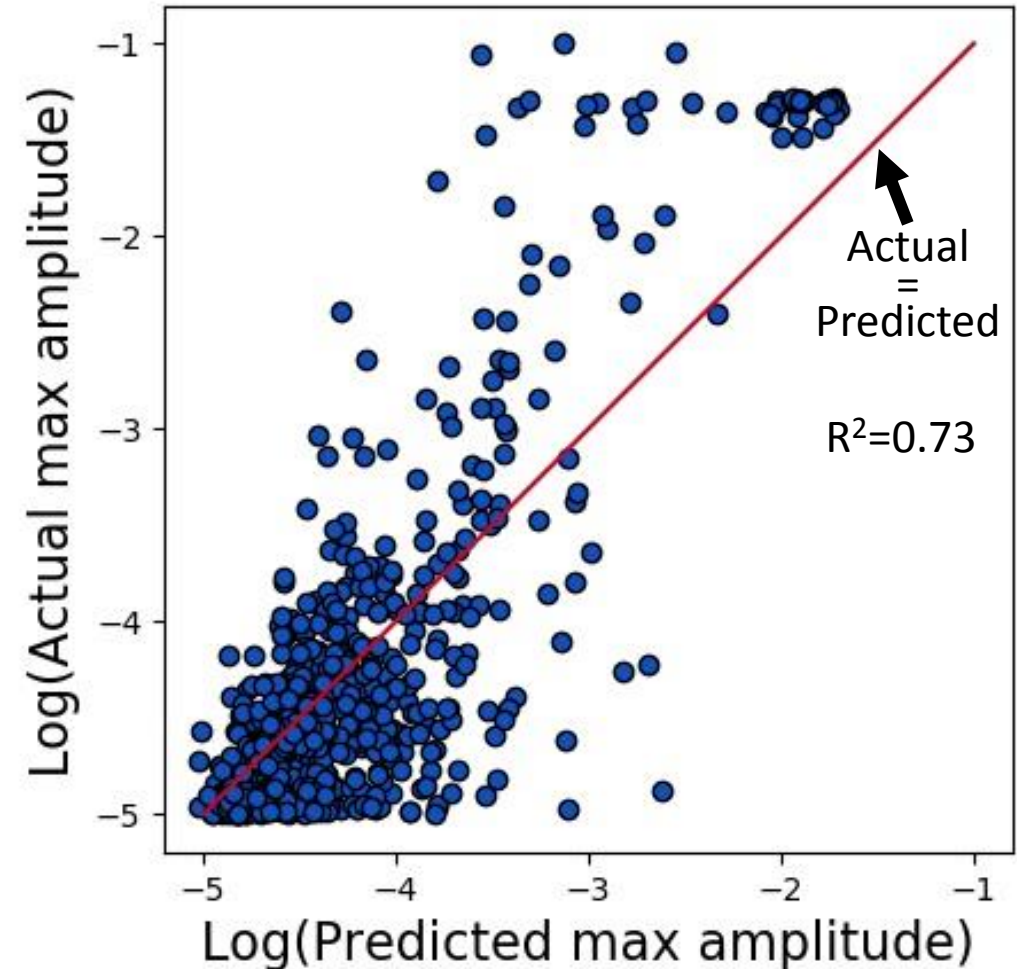
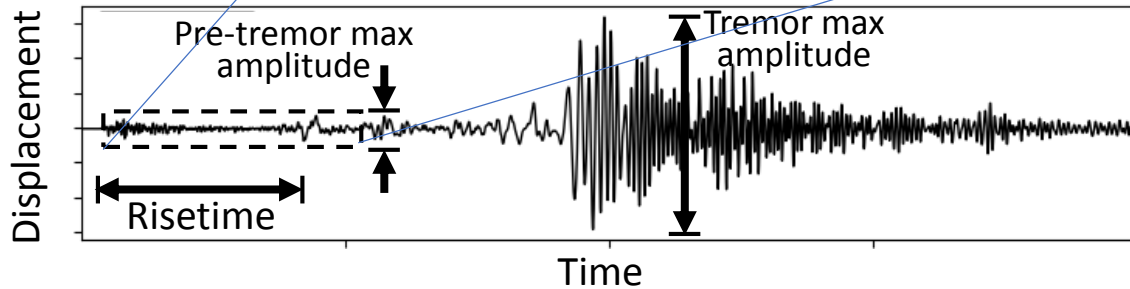
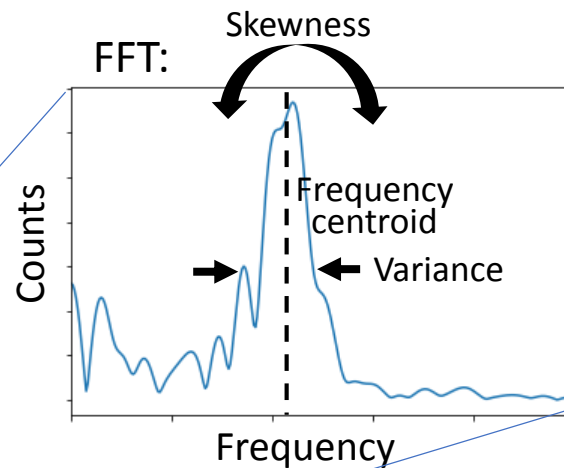
ML Amplitude Prediction Model

Model Inputs:

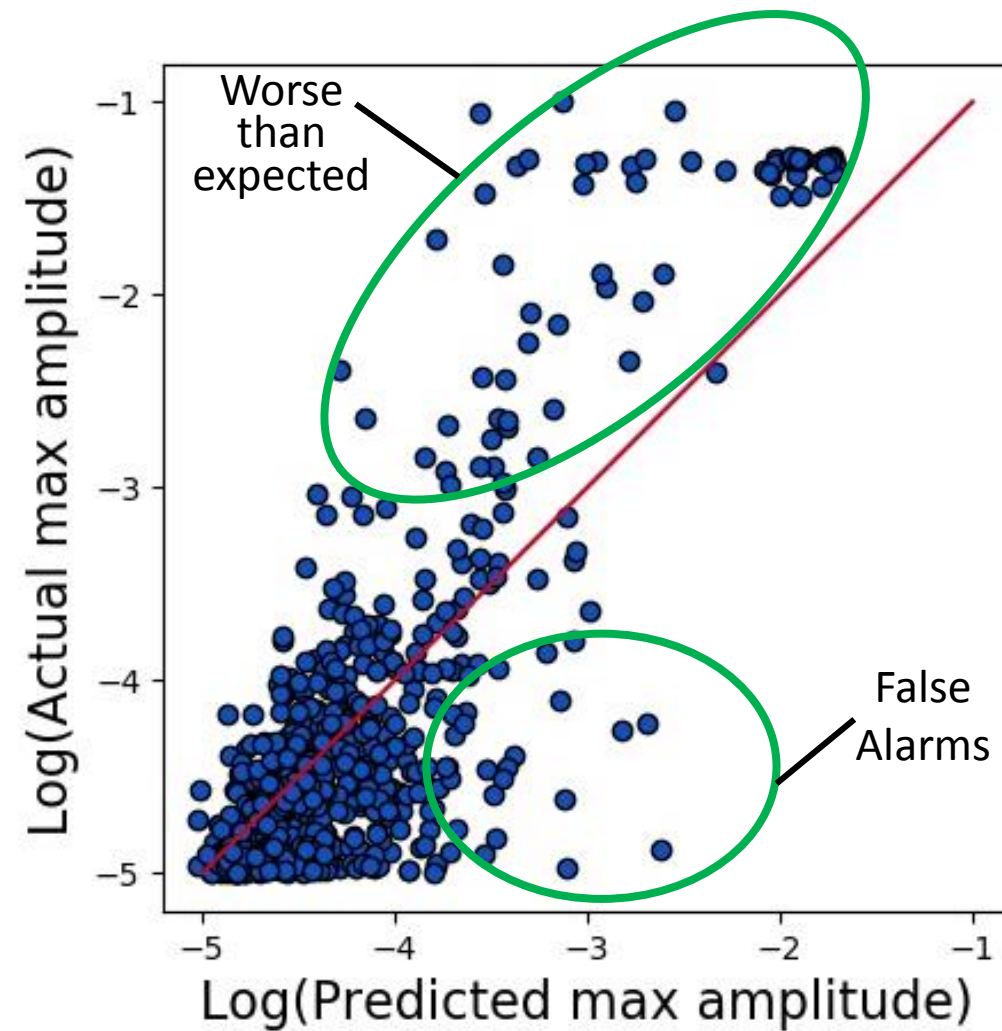
- Pre-tremor max amp
- Risetime
- Spectral Skewness
- Spectral Variance
- Spectral Centroid

Model Outputs:

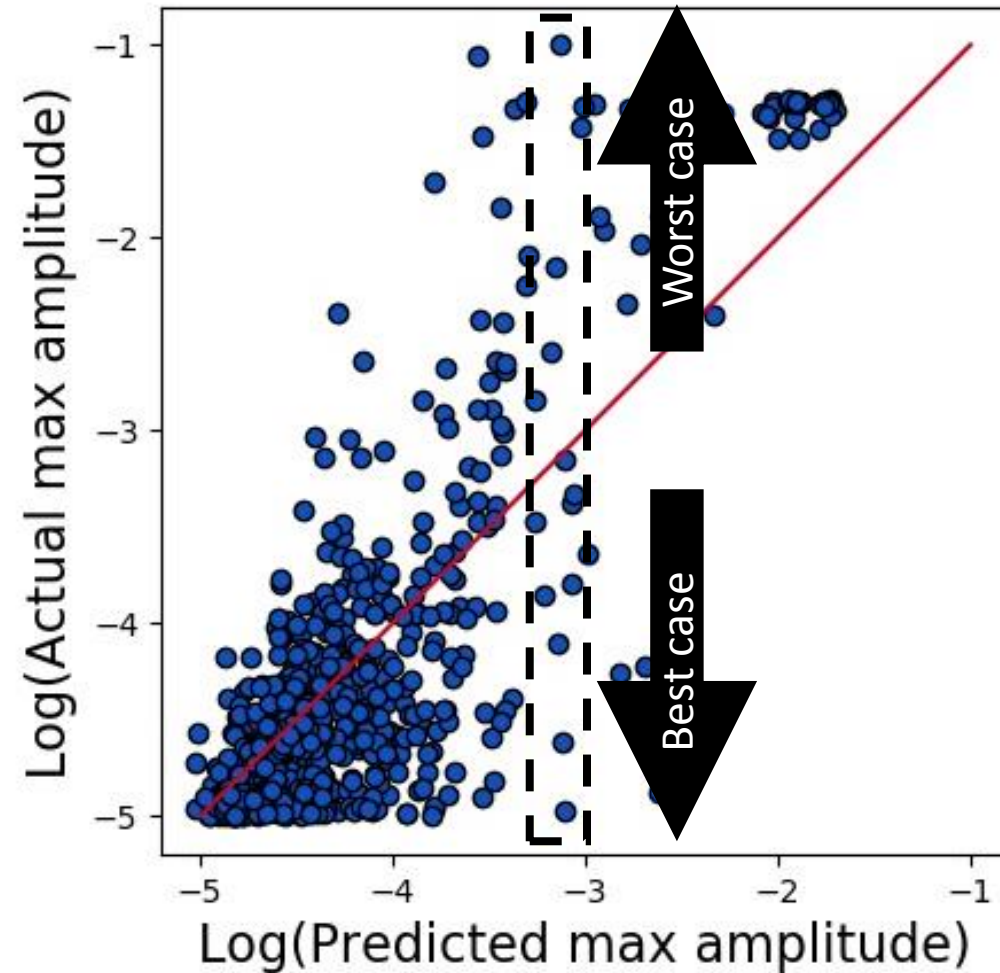
- Tremor max amp



End Deliverable



End Deliverable



End product will be an interface that:

- Predicts amplitude
- Quantifies level of certainty