Compute\_pga.py

* Reads in signal seismogram, filters
* Takes gradient for acceleration and finds the maximum value

Compile\_database.py:

* Script that takes anza record .pckl database and combines with event information from the USGS catalog
* Matches by event id and converts magnitude
* Write to pickle database

Create\_ANN.py:

* Contains fitANN function
* Builds and fits model

Mixed\_effects\_run.py

* Runs mixed effect maximum likelihood codes

ANN\_run.py

* Contains functions runANN and runANN\_k
* Format and scale model inputs and outputs
* Calls residual plotting function from plot\_gmpe

Grid\_search.py

* Grid search for hyperparameters for models with 1,2, or 3 hidden layers
* Computes and saves number of hyperparameters and Akaike information criterion (AIC) for model selection

ANN\_plot\_top10models.py:

* Plots top 10 AIC models for comparing behavior/functional form

Map\_plot.py

* Map plot of events and stations

Plot\_gmpe.py

* Contains plotting functions
* plotting, plot\_az, plot\_AIC, plotsiteterms, plot\_dist\_curves, plot\_mag\_curves, residual\_histo, setup\_test\_curves, setup\_test\_curves\_scatter, setup\_curves\_compare

Compare\_plot.py

* Plots site terms and model residuals for paper figures

ANN\_plot.py: