Metadata ino:
Source description: The source file has below columns.

#time latitude longitude depth mag magType nst gap dmin
#rms net id updated place type horizontalError depthError
#magError magNst status locationSource magSource

Some of the data may have blank. Therefore handling empty cell is required.
The file is formatted with CSV standard.

The program-07.py has analysis of KDE plot, CDF plot, scatter plot, histogram. Once the CSV file is converted into DataFrame, the programmer can have more flexibility to join, split the data as he/she wants.

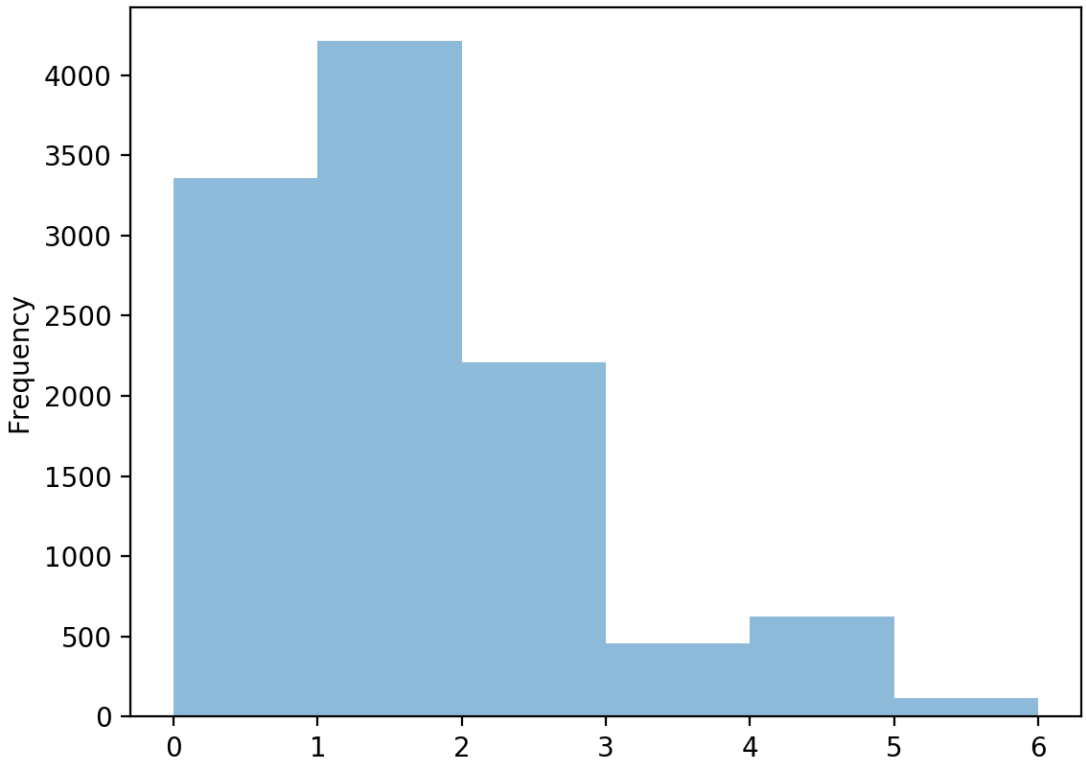

Fig. 1histogram of earthquake bin =10

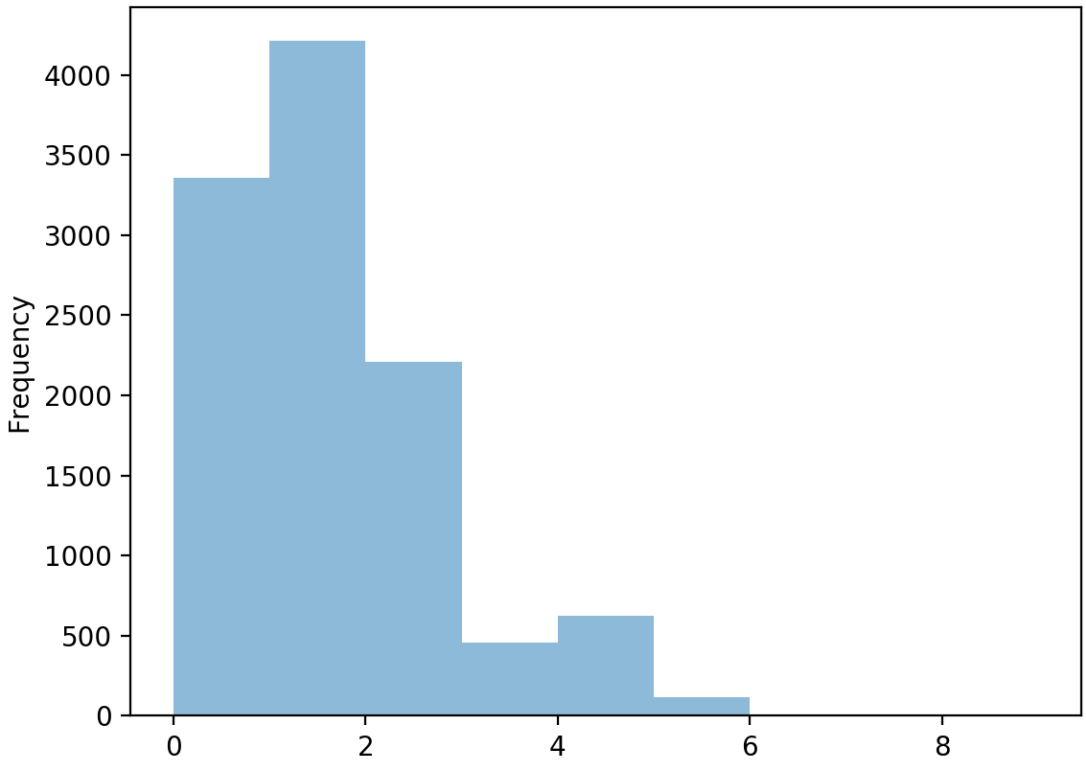

Fig. 2 Histogram of earthquake with bin= 7

#based on several trials, 6 bins shows the most.
#With low bins, i.e. 4, 0 to 2 showed the most freqeunt. This also referes to
#too much information is compressed.
#The histogram suggests that 1 to 2 magnitude of earth quake is most frequent.

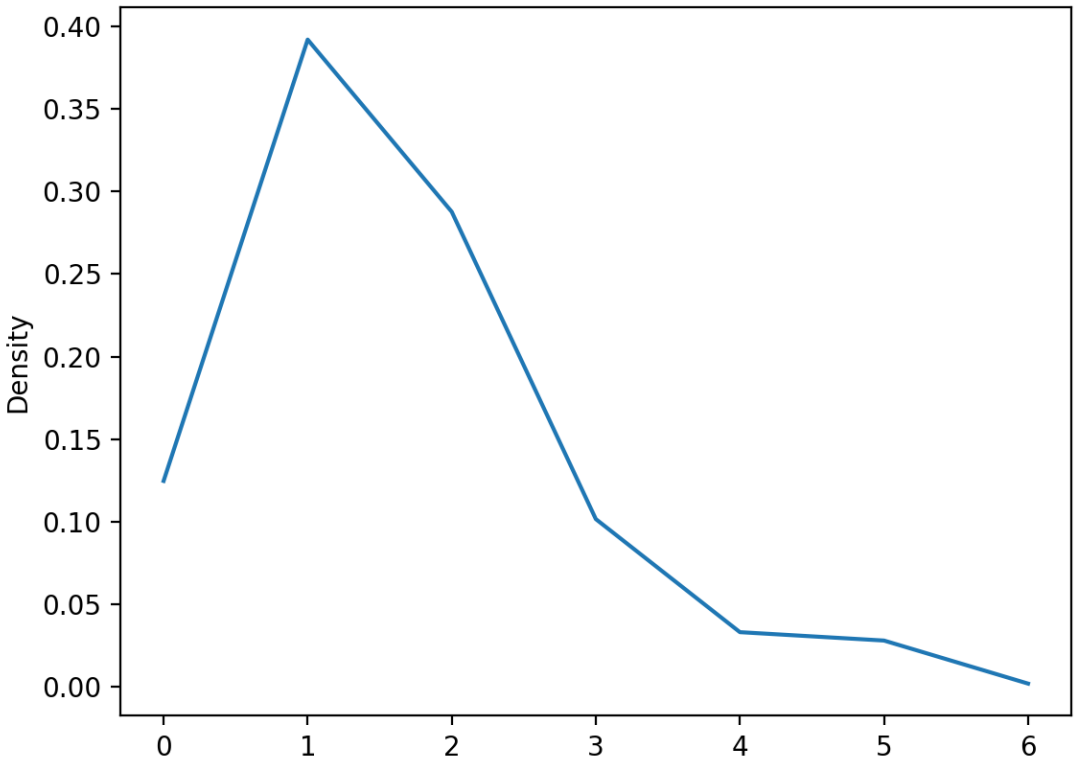

Fig. 3 KDE plot with bin = 6

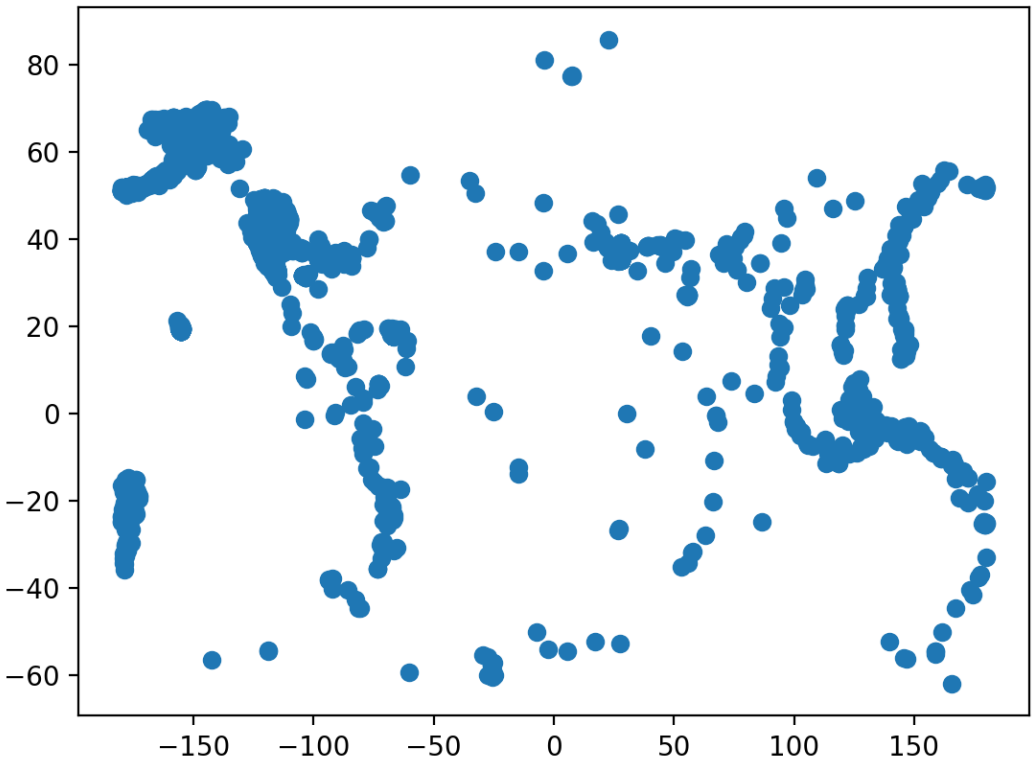

Fig. 4 Lat VS Long for earthquakes

#plot long and lat info. Must use longitude for x axis, which measures x axis for plotting
#https://desktop.arcgis.com/en/arcmap/10.3/guide-books/map-projections/about-geographic-coordinate-systems.htm

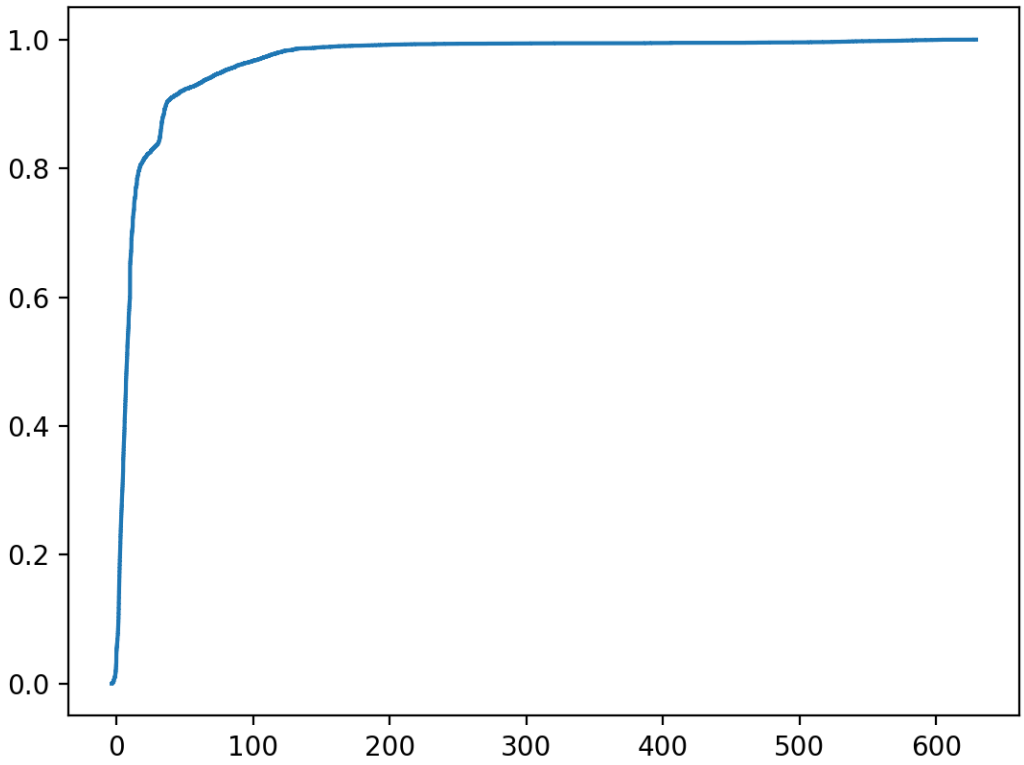

Fig. 5 CDF plot for earthquake depth

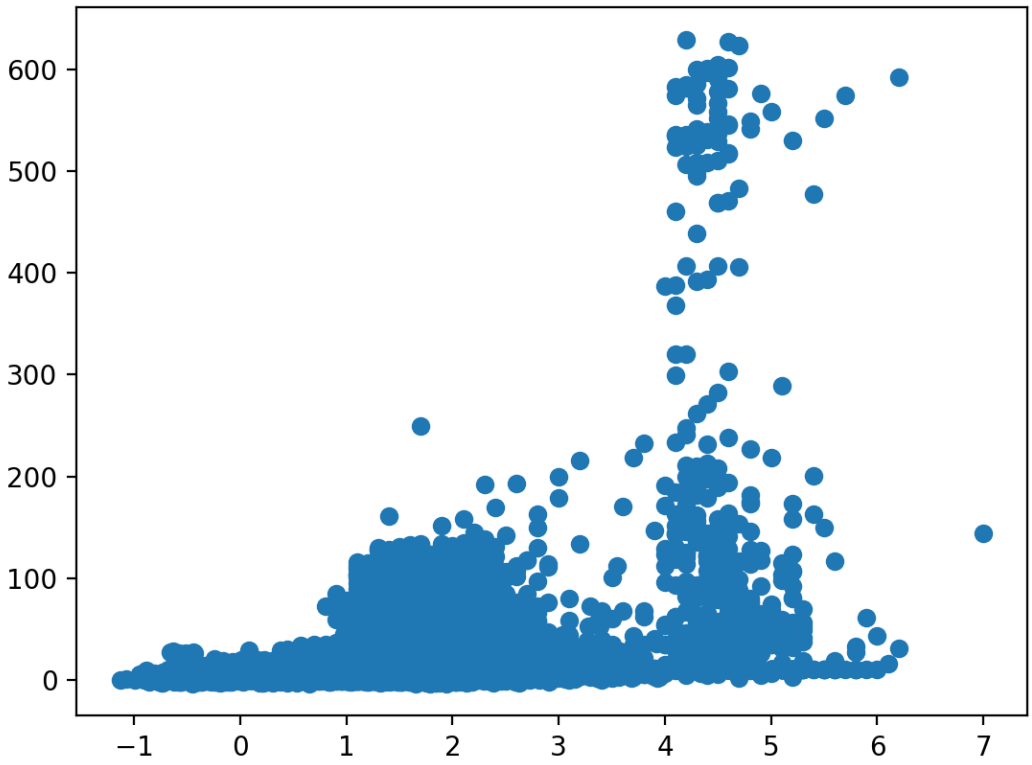

Fig. 6 Scatter plot for Mag VS depth

#low magnitude earth quake happens at shallow depth.

#however large magnitude, 4 or 5, happened from very deep.

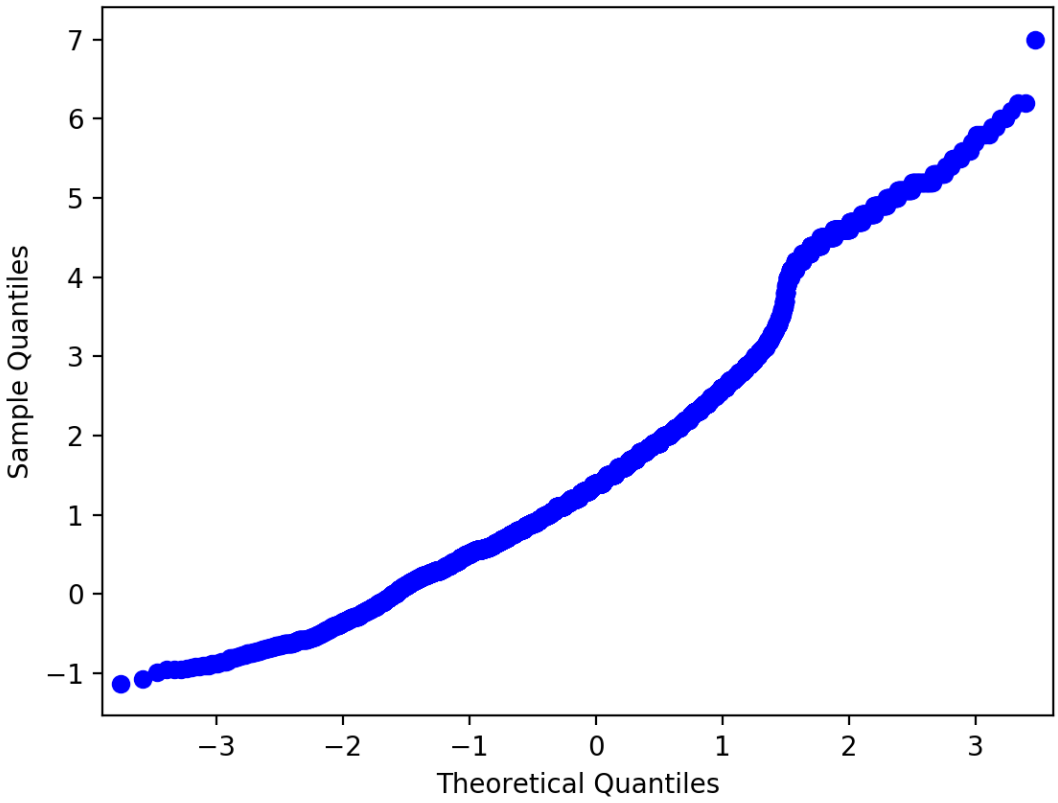

Fig. 7 Q-Q plot for earthquake magnitudes