Assignment 1B – INFO 250

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About the *graph:*

The graph is a scatter plot that showcases the distribution of the earthquake based on the magnitude and the depth. Some visual cues/capabilities:

1. Color – Each color corresponds to a geographical region
2. Size of the data point – Bigger the datapoint, higher the depth of the earthquake
3. Filter - One can filter the scatter plot based on region, magnitude, depth, longitude, and latitude
4. Tooltip – Shows information about Depth, Magnitude and Region
5. Label – When there is available space, depth will be shown with each datapoint

User Tasks:

1. Overview – The scatter plot does give an overview of 3 different variable (magnitude, region and depth) for each earthquake that occurred. One can see all datapoints at once or see any individuals
2. Zoom – The scatter plot does give a user the option to zoom on any specific datapoints. Supposedly if they only wanted to see the earthquakes with a magnitude of 8.0 and higher, they have the capability to do so
3. Filter – The user has the ability to filter on 5 independent variables - region, magnitude, depth, longitude, and latitude
4. Details – on – demand – For the scatter plot, this ability is available, but it is limited. The user can see a view details for a specific data point, but it does not encompass every single metadata about that earthquake.
5. Relate – The scatter plot shows a relationship between 3 different variables – Depth, Magnitude and Region.
6. History – The scatter plot does retain a history of the user's commands
7. Extract – The scatter plot does not allow open-ended query parameters (only pre-defined ones are available under filter) and sub collections

Link - https://public.tableau.com/views/Earthquake-visual/DistributionofEarthquakesbasedonMagnitudeandDimension?:language=en-US&publish=yes&:display_count=n&:origin=viz_share_link

Two Supplementing Graphs:

1. Distribution (Scatter Plot) of Gap with Magnitude and Depth – Seismic gap is an important factor about an earthquake. We could create a scatterplot focusing on the gap relating to the magnitude and depth and possibly the region. (Add-on to the current graph)
2. Tree Map of different regions and with a subcategory of count of the number earthquakes in bins of magnitude under each region. This can help us identify regions with max/min numbers of earthquakes and generally what magnitude of earthquakes take place in that region.