Note-taking assignment for Lecture week - 7
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- The lecture started off with a warm-up activity that included discussing a visualisation from the following website:
  https://zzzev.com/movies/ (Plot no.7)

- The following questions were discusses based on the visualisation from the above link:
  1. What is the visualisation trying to show?
  2. What are its methods?
  3. What are the strengths/weaknesses?

  Responses: From my observation the visualisation consists of data that records the words used in speeches given by the Academy award recipients over the course of time between 1960 to 2017.
  The x-axis represents the words present in the speech and the y-axis represents the category of award.
  There is also a colour bar at the right-hand bottom of the graph that gives the frequency of the word used in terms of percentage. The range of the word used is from 0% (represented by dark blue color) to 50% (represented by lemon yellow color).
  The data is represented in pixels (Raster format). The strong point about this method of representation is that there is clear distinction of data. However, the downside is that it isn't very easy to understand and the data isn't coherent.

- Later on, the topic of interactivity in visualisation were discussed. Parameters of interactivity like point characteristics, axis limits/bounds and transforms/scales were introduced.

- Another interactivity parameter called 'Linking and brushing' were discussed. For example consider two 2D scatter plots. Plot1 consists of variable1 and variable 2 whereas the plot2 consists of variable 3 and variable 4.

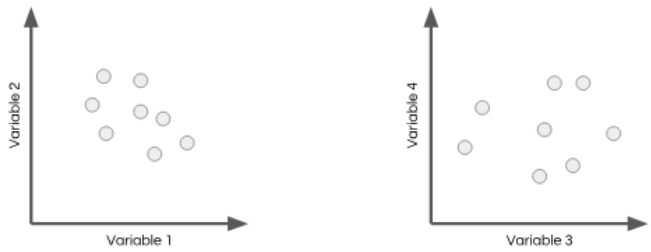

Figure1

- Functions like filtering, linking and brushing were applied to the Plot1 and Plot2 as shown in above Figure1.

- The lecture progressed by continuing the discussion on practical application of bqplot package. The following features that are available in bqplot are:

    a) Types of scales (LogScale, LinearScale, DateScale, OrdinalScale, ColorSclae, etc)
    b) Types of marks (HeatMap, GridHeatMap, Bars, Graph)
    c) Types of interactors (FastIntervalSelector, IndexSelector, BrushIntervalSelector and BrushSelector, MutliSelector, LassoSelector, HandDraw, PanZoom, Tooltip)

- The last segment of the lecture class was spent discussing the methods to design a dashboard using bqplot and Vega-Life.

- The steps to design a design a dashboard are:
    Step 1: Create heat maps of the data sightings
    Step 2: Select the section/area of data for inspection
    Step 3: Manually create 'bins' for aggregation
    Step 4: Use different scales for dates, times and location.

- The following examples of dashboards using Tableau and Glueviz is as shown below:

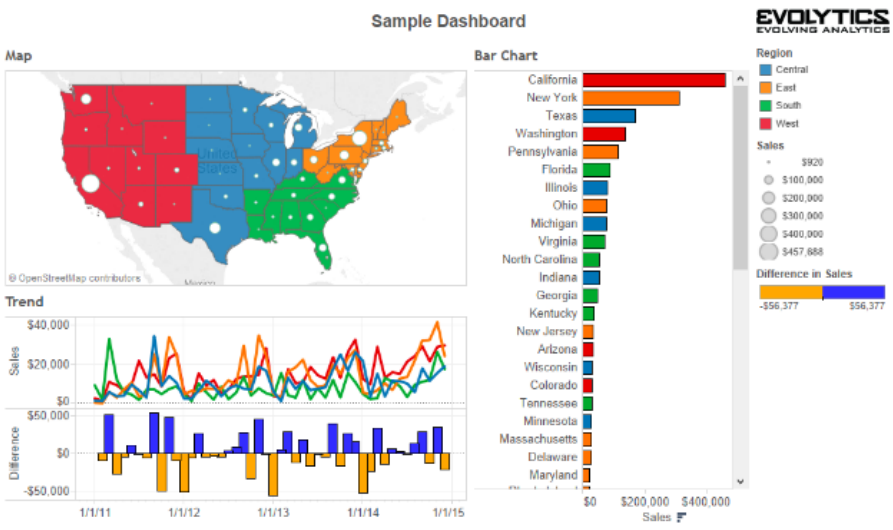

Figure2: Dashboard designed using Tableau

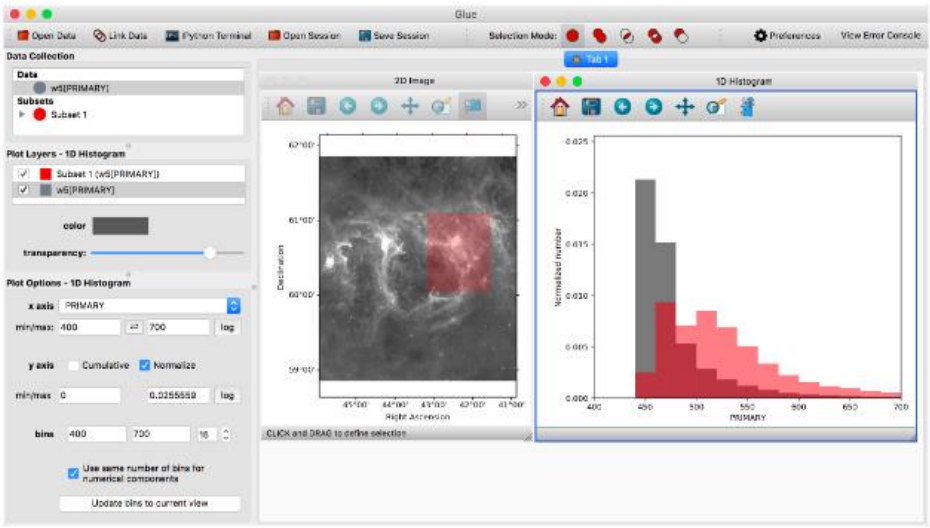

Figure3: Dashboard designed using Glueviz

- The lecture class concluded discussing the Assignment 6.