Course Eight

Week Two

Objectives

- Identify commonly used visualization tools and be able to differentiate between them

- Explain how to create each visualization tool using Matplotlibs

- Decide when would be best to apply each of the visualization tools

Basic Visualization Tools

Area Plot

- Depicts accumulated totals using numbers or percentages over time

- Based on the line plot and is commonly used when comparing 2+ quantities

- How do we generate area plots?

Histograms

- A way representing the frequency distribution of a numeric dataset

- Separates data into bins; assigns each datapoint to a bin; counts the number of datapoints that have been assigned to each bin

- How do we generate histograms?

Bar Charts

- Arguably most popular visualization tool

- aka bar graph: length of each bar is proportionate the item it represents

- How do we generate bar charts?

Specialized Visualization Tools

Pie Charts

- Circular statistical graphic divided into slices to illustrate numerical proportions

- How do we generate pie charts?

Box Plots

- Represent data through 5 dimensions: minimum, first quartile, median, third quartile, and maximum.

- Can you explain each dimension?

- How do we generate box plots?

Scatter Plots

- Displays values pertaining to two variables against each other: dependent vs. independent

- Determines whether or not a correlation exists.

- How do we generate scatter plots?

Activity

Using the dataset provided to you, create a visualization of the data using the tool assigned to your group.

Now decide:

- Which of the six visualization tools would be the best choice for visualization of this specific data set? Why?

This afternoon:

- Complete the lab, quiz and reading for both sections of Course Eight Week Two

- Add useful resources to the discussion board

- Participate in the Q&A discussion board where possible