CIS 4930/6930-002: Data Visualization (Spring 2017)

Project 4: Adding Interaction

1 Objectives

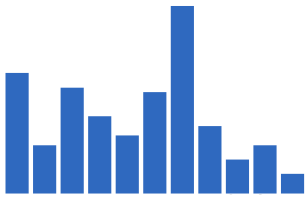
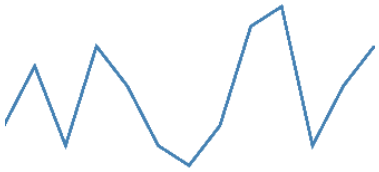
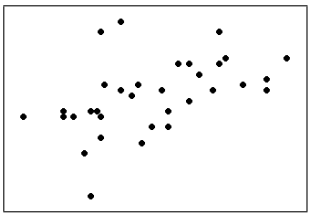
In this assignment you will add interactive elements to your previous designs. Again, take care to use good software engineering practices.

2 Ground Rules

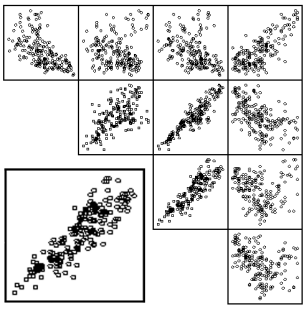
This assignment is intended to be done alone. You may ask others for help with figuring out how details of Processing. However, code must be your own (MOSS will be used!). Furthermore, NO additional libraries (such as giCentre utilities) may be used. Doing so will result in a 0 for those sketches.

3 Assignment Instructions

- Download the data set at `http://www.calvin.edu/~stob/data/srsatact.csv`. This dataset contains standardized scores for all Calvin College 2004 seniors that have taken both the ACT and the SAT, together with their GPAs. There are 271 data points and 4 dimensions.
- Modify your sketches from Project 2 and 3 to have a 800x600 resolution.
- To your BAR CHART, LINE CHART, and SCATTERPLOT, add an interaction that pops up data information when the mouse is over/clicks a particular bar/data point. Add to all of your plots the ability switch which attributes are being visualized.

- To your SCATTERPLOT MATRIX, add a detail view (an additional large scatterplot). Add an interaction such that when a plot is selected in the scatterplot matrix, it updates the detail view to those data attributes.



- Add any additional interactions that you think will make your sketches more useful.

- Modify your sketches such that they use additional visual channels to encode additional variables. Consider using color, size, shape, depth, etc. Your selection and their implementation will have an impact on your grade.

- Add embellishments of your choice. These can include but are not limited to: axis lines, labels, and tick marks. Consider the margins for your embellishments (try to pick good values for the tick marks and a good number of them—not too many and not too few). Your selection and their implementation will have an impact on your grade.

- Make your visualizations robust by designing them to support any data (number of elements or value range) and by designing them to support any size or aspect ratio of canvas.

4 Submission

Please submit your data file and sketches in a single zip file on Canvas by the start of class on the due date. Make sure things are labeled well, so that your peers can find them.

5 Grading and Feedback

- Your grade will be combination of objective measures (based on the assignment instructions) and subjective grading by the instructor.

- Peer Review will be used to provide feedback. You will review 3 of your peers' submissions, and 3 of your peers will review your work. This should be taken very seriously as it is the primary form of feedback you'll receive.