

## SI649/EECS598 Fall 2015

Instructions:

Step 0) Create a new google doc and share it with all members of your group and me ([eytanadar@gmail.com](mailto:eytanadar@gmail.com)).

Step 1—probably <15 minutes) Take a look at the two different visualizations you have been given. Each shows a different technique for visualizing the same dataset (overlapping sets, with a particular example for fruit/red/green/vegetables). Following each vis page is a breakdown of all the graphical *marks* used for that particular visualization. First do this individually, and then as a group:

Determine how the different retinal variables are used for each mark. If you need a reminder of what these are, take a look at your card deck (the cards labeled encoding). What does the color mean? What does the size mean? The location? etc. (not everything may be used). Do this by creating a table on the page (marks on the y-axis), encoding types on the x-axis.

Once you have the encoding, make a determination about the type of data being encoded (i.e., nominal ordinal or quantitative).

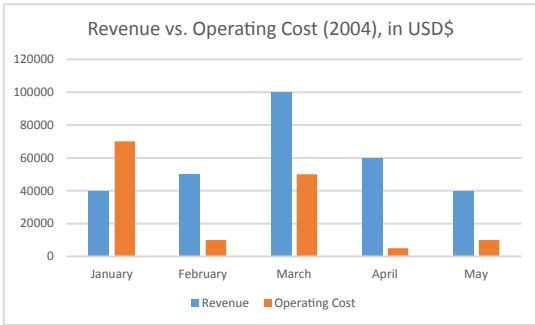
Once you've agreed on this, take a picture of your table(s) and load them into your google doc.

Step 2—probably 30-40-minutes) Look through the “abstract task” cards. Determine which ones apply to which visualization. That is, which of the visualizations support (express!) the task. Make notes into your shared google doc. Not all tasks can be supported. As you go through these, try to rank them. Which tasks do you expect the visualizations to support the best (effective!)? Try to rationalize this in terms of your perceptual principles (see your cards, things like gestalt principles, pre-attentiveness, etc.). Which ones that effecting the visualization in a good way (making something more effective)? And which ones are hurting? (keep updating your google doc with notes)

Step 3—leave 15 minutes at end of section) Now that you have a set tasks (ranked), design an experiment that you might use to evaluate whether one technique is better than the other. How would you create a meaningful comparison? What tasks would you have people do? Think beyond the fruit/vegetable data. Where else do you need to compare sets? Think also about things like scale. Write up notes for your design as you go.

Step 4—last 15 minutes of the section) At the end of class I'm going to have you describe your experiment and decisions (very quickly to another group).

Take lots of notes!



position	area	shape	slope	color	hue	texture	angle	volume	length
month/type	n/a	constant	n/a	type	n/a	n/a	n/a	n/a	\$
nominal/nominal				nominal					quantitati

Abstract tasks this might support:

Comparing associated values (e.g., revenue vs. operating cost in specific month)

Comparing associated values by type (e.g., January cost versus March Cost)

Comparing over time (e.g., revenue or operating cost trends over time)

Comparing differences in grouped types (e.g., profit over time)

etc.

Month (N/O)	Type (N)	Amount (C)
January	Revenue	40000
January	Cost	70000
February	Revenue	50000
February	Cost	10000
March	Revenue	100000
March	Cost	50000
April	Revenue	60000
April	Cost	5000
May	Revenue	40000
May	Cost	10000

