11-26 – 12-3 – Data Visualization

* Visual Features
  + We do scientific visualizations to help decision making
  + The semiology of graphics is the set of rules that allow to translate information into graphics
  + Some features can be processed faster than others
  + Some features have an expected quantitative meaning
  + If a decision takes a fixed amount of time regardless of the number of distractors, it is considered to be preattentive
* Common Mistakes
  + Unnecessary 3D – may look cool but can distort the way data needs to be represented
  + Don’t get people to compare areas or volumes
  + Data must be seen and not make your reader guess
* Choosing the right visualization
  + Slide 35 for chart
  + Bar graph
    - For comparing data across categories
  + Pie chart
    - For showing the relationship between an entity and the whole
  + Line chart
    - For showing how data changes at equal intervals of time
    - Make sure they have a common axis for several series
    - Data is discrete, not continuous. Our data only has points, we inferred the lines
  + Scatter plot
    - For comparing 2 distributions or trying to find a correlation
  + Choropleth Map
    - For geographical data with a single indicator to display
  + Waterfall charts
    - For looking at the cumulative effect of positive and negative values
  + Parallel axes chart
    - For showing many variables as a function of many others