Notes 2-20-19

Data Visualization: Visual Systems

* Recap
  + Data visualization: mapping data onto geoms and their visual attributes
    - Geoms: geometric objects
  + Includes shapes, graphs, polygons, colors, hues, values, etc.

Process & Classifications

1. Encoding data
2. Analytical Tasks (Stephen Few)
3. Visual system
4. Habits, Recommendations, Guidelines

Visual System

* How to translate data into the language of the human eye
* Foveal vs Peripheral Vision
  + Eye perceives images in pieces, brain assembles the images
  + Foveal is the focus of your eye, narrow, sharp and crisp detail
  + Peripheral is the rest of the 180 degrees of light your eye detects, unfocused
  + Key to understand this so that you make interpretable graphs
* Attention & Memory
  + Iconic, short term, and long term memory types
    - Iconic: orientation, length, closure, size, hue, etc
    - Short & long term memory 🡪 Postattentive vision
      * Brain process
      * Requires conscious effort to process an image

Perceptual Tasks

1. In order of least to most post attentive effort required:

* Position on a common scale
* Position on nonaligned scale
* Length-direction
* Angle-slope
* Area
* Volume-curvature
* Shading and saturation