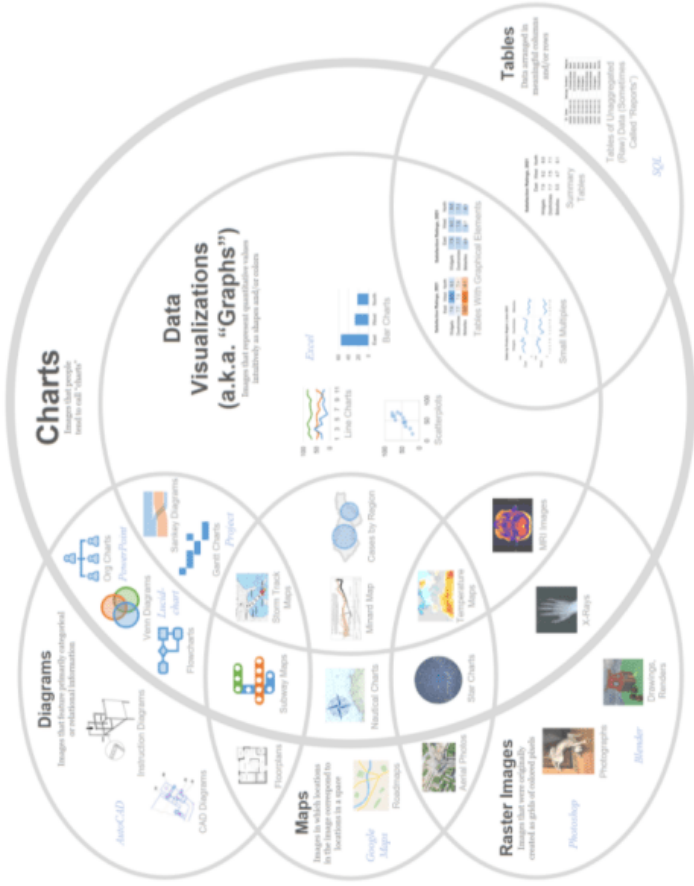

This worksheet uses the linked Google sheets file `introvis2023-lab01` found on ORTUS. Open it and make a local copy for yourself.

1. In your local version, open the first sheet “Sheet1.”
 - (a) Create a bar chart from the data using “Insert → Chart.” Note the “Customize” tab that appears in the “Chart editor” sidebar.
 - (b) Explore all the different things you can change in the data, including, but not limited to:
 - Adding a title
 - Ordering the data
 - Changing the labels
 - Changing the ticks on the axes
 - Choosing different colors
 - (c) Submit on ORTUS your stylized version of the bar chart.

2. In your local version, open the second sheet “Sheet2.”
 - (a) Create a line plot from the data, with two lines. Note that the numbers are in very different ranges for each - try to make the lines visually similar, but with two different number scales, one on the left side, one on the right side of the plot.
 - (b) Submit on ORTUS your plot.

A Map of Data Visualization



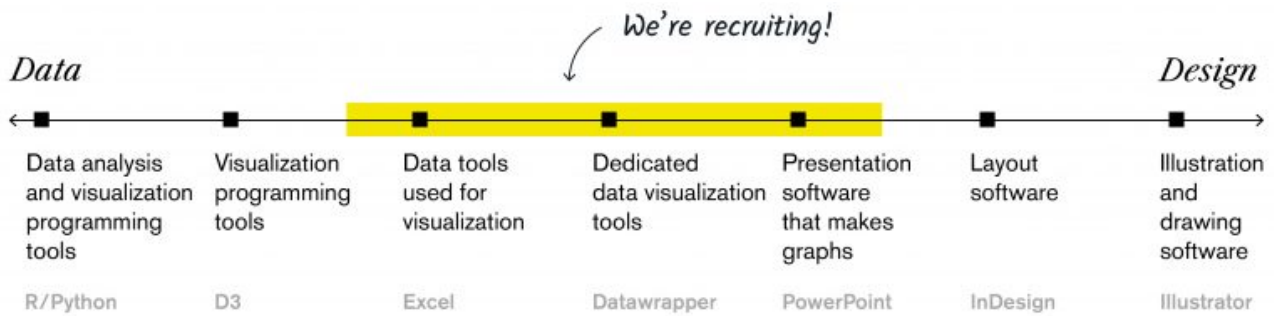
Design Styles of Charts and Things That Can Contain Charts



Design Skills & Data Communication Techniques

- Fundamental Skills**
 Skills that are used to design any chart or thing that contains charts.
- Selecting chart types, scales, color palettes, legends, etc.
 - Understanding the context of the data
 - Avoiding misrepresenting data
 - Basic statistics
- Specialty Skills**
 Skills that are used to design newer charts or things that contain charts.
- Graphic design
 - Artistic talent
 - Understanding of human-computer interaction
 - Coding
 - Advanced statistics, process control, etc.
- Data Communication Techniques That Go Beyond "Just Showing the Data"**
 Techniques that are used to communicate data in a way that is more than just showing the data.
- Embedding charts in story arcs, anecdotes
 - Creating curiosity, tension by gradually revealing data
 - Using characters, humanizing data
 - Violating expectations
 - Etc.
- Storytelling Techniques**
 Techniques that are used to tell a story with data.
- Explicitly stating insights/recommendations in chart titles, callouts
 - Visually highlighting important parts of chart
 - Removing non-essential data
 - Etc.
- General Communication Techniques**
 Techniques that are used to communicate data in a way that is more than just showing the data.
- Using characters, humanizing data
 - Violating expectations
 - Etc.

Data and visualization: The spectrum of skills and tools between data proficiency and design proficiency. “Visualization” is somewhere in between, plus more in a third direction. (source: LinkedIn)



Books about data visualization: Some of these (and some not mentioned) you will have access to this semester. (source Twitter)

