## In-class Coding Exercises

## Module 5

START VISUALLY UNDERSTANDING YOUR THESIS DATA. Within your group, discuss your thesis data and the 10 specific questions you wanted to ask of your thesis data (per the online class prep). Discuss what kind of plotting characteristics would best answer these questions:

<sup>1</sup> If you did not come prepared with these 10 questions, bad on you! Develop them now.

- Which type of plots could answer these questions?
- Which geoms can be used to make these type of plots?
- What are potential ways to map the data to aesthetics (color, shape, size)?
- How could facetting help?
- Do you need to be concerned about unique statistical transformations  $?^2$
- Should you assess different position adjustments (i.e. jitter, side-by-side vs. stacked bar chart)?
- Will certain coordinate adjustments help (i.e. coord\_flip)

After refining your visualization "strategy" to answer your questions based on group input, develop these visualizations. Once you've developed the baseline visualizations work on refining them by

- Adding a title and subtitle
- Properly labeling the axes
- Adjusting the different scales<sup>3</sup>
- Adjusting the theme

<sup>2</sup> i.e. do you need to include stat = "identity" in your bar chart?

 $^3$  i.e. x and y axes, color scales