

## Assignment 1 (on basic charts and styling; all material through Sept 4)

30Points

**You need to create two different workbooks.**

- I. Use the data in McDonalds - Small.csv to:
  - a. (3 points) Create a bar chart to show the number of calories for each item on the menu. Decide if you should use horizontal or vertical bars.
  - b. (3 points) Create a grouped bar chart to show the carbs and protein for each item on the menu.
  - c. (5 points) Create a stacked bar chart to show the protein, carbs and total fat for each menu item.
  - d. (5 points) Create a chart that will help you understand if there is a relationship between the calories and the carbs. In other words, you want to know if foods with more calories also have more carbs., or less carbs. We are focusing on the trend of the values, not specific food. What chart type should you use?
    - a. **Hint:** There is one right answer in this case.
- II. Use the data in temperature\_electricity\_demand.csv
  - a. (3 points) Create a line chart to show the temperature for each day of 2024.
  - b. (5 points) Create a line chart that shows both the temperature and the electricity demand for 2024. Should you be using single or double axis?
  - c. (6 points) Duplicate the chart from part b. In part b. you will notice overlap that can make the patterns hard to see. On the new chart, adjust the axis to shift one of the measures. This should avoid the overlap and it should also make better use of the white space on the chart.

For each plot, label the axes appropriately (remember that obvious categories and dates don't need an axis label), have a meaningful legend (if you need it), have a title. Feel free to add custom styling. Don't use the default colors. Choose your colors thoughtfully and provide an explanation. We will talk a lot about styling charts so don't submit early. I expect you to apply what we have discussed in class during the week.

### **SUBMISSION REQUIREMENTS:**

Submit two .twbx files. Do not submit .twb files. After you submit check!

Submit another file or use the text box in the comments to explain what colors you chose and why. If you used a source (you should) cite the source. 10 points will be subtracted for not providing an explanation about your color choice.

### **Grade breakdown:**

Up to 50% of the grade can be based on your styling.