

M2.1 Exercise: Introduction to Data Visualizations

Instructor Note: The goal of this exercise is to ask students to begin thinking about data and creating visualizations with it. By gathering data and creating a visual using their own data, students will experience the way data is all around them and that visuals help make that data meaningful.

Instructions

This exercise asks you to collect data and create a data visualization that communicates that data graphically. By gathering your own data and using it to create a visual you can see that data is all around you and visuals help make that data meaningful.

Step 1 - Collect Data

At home, or wherever you are working, collect a set of quantitative (numerical) data. Consider various types of data, for example:

- How long does it take to get to a specific floor in the elevator vs. climbing the stairs based on multiple tries?
- What's the ratio of books to other stuff on your shelves?
- How much time do ducks spend foraging vs. just wandering around?

Think about the various processes that take time or require resources (e.g., how many almonds you eat in an hour, or the average time it takes to drink a bubbly water). Think about the items you have around you and what they are used for (e.g., what apps do you check on your phone in an hour). Quantitative data is all around you--every time you do something, check something, or observe something, you are generating data. And so are the things around you--e.g., stoplights, phones, dogs, and squirrels. Select an item or items around you (including yourself) and collect the data it generates.

Step 2 - Create a Visualization

Once you have your data, you will create a data visualization that represents your data. To pick the type of data visualization, go back to the Design chapter you read and review the visualization types. You can also use the site *The Data Visualization Catalogue*¹ to help you narrow down the type of visual you may want to use.

You will create your visual digitally using Excel. Take some time to review the following LinkedIn Learning tutorials for more information on how to sort data, as well as how to create charts and visuals in Excel:

Sort data in Excel (see link https://www.linkedin.com/learning-login/share?account=2343682&forceAccount=false&redirect=https%3A%2F%2Fwww.linkedin.com%2Flearning%2Fexcel-2021-essential-training-office-2021-ltsc%2Fsort-data-in-excel%3Ftrk%3Dshare_video_url%26shareId%3DDDD8Z5NWER12fOvgi1HmaNQ%253D%253D)

¹ The Data Visualisation Catalogue: <https://datavizcatalogue.com/>

Create and work with charts (see link https://www.linkedin.com/learning-login/share?account=2343682&forceAccount=false&redirect=https%3A%2F%2Fwww.linkedin.com%2Flearning%2Fexcel-2021-essential-training-office-2021-ltsc%2Fcreate-and-work-with-charts%3Ftrk%3Dshare_video_url%26shareId%3Df%252B6qp57wQta02jZNaRzOSQ%253D%253D)

Step 3 – Submit Visualization

Submit both your dataset and visual.