

# INFORMATION DESIGN

## PROJECT INSTRUCTIONS

Percentage Weight of Final Grade: 15-20%

### LEARNING OBJECTIVES

- Create accurate, clear, and ethical visuals from numeric data
- Analyze visuals to support a specific point or argument
- Apply principles of design to create a visually appealing, readable document
- Write using a style that emphasizes clarity, concision, and accuracy

### WHY USE VISUALS?

As you will learn in completing this project, numbers don't speak for themselves, and writing with data requires critical and rhetorical thought, as well as visual design skills.

Data visualizations bring a number of benefits to any professional document, even short ones:

- Though they have become extremely easy to make, **people in the workplace still tend to be impressed** by the extra effort and thoughtful presentation implicit in making a visualization.
- Data visualizations also help to **make the work of digesting and interpreting data more efficient** by displaying trends or illustrating the significance of specific information without poring over page after page of numbers.
- Because of this efficiency, visual elements are also **better at communicating certain ideas more quickly than words or tabular data**. Something that may take many sentences to communicate, a sudden drop in the efficiency of a process, or a surge in sales among a certain demographic, are instantly recognizable as spikes or dips along the X axis of a line graph.

#### FOR EXAMPLE:

This short report from the Department of Education provides an overview of literacy and numeracy for men and women. In this online short report, the authors created two bar charts that are designed to show relationships between data and then they briefly explain the importance of the data.

However, as previously mentioned, numbers don't speak for themselves. Integrating visuals comes with all the benefits listed above, but using visuals also comes with responsibility to use visuals fairly and justly. Visuals reduce people to numbers, to data, and then, by making a visual using some data but not other data, you make some people more significant than others. Your visuals represent a choice to emphasize some facts, and, in so doing, deemphasize others. Your visuals must be complete and accurate, but also fair and just. When you create your visuals, you should start with questions such as, "Am I representing the data accurately?" and also, "Am I representing the data fully and in a way that does no harm to certain groups?"

## ASSIGNMENT

Choose one of the following scenarios and produce a **one to two-page, informative, visually interesting report** that uses the dataset provided to address the scenario. This report should incorporate at least three visuals that you have created along with a discussion/analysis of the data in your figures.

The text in your report should

- introduce the topic and its importance
- explain the meaning of the visuals
- point to the conclusions suggested by the data.

In working on this project, you will engage with different types of visuals, as well as the conventions of writing with data and numbers. To achieve these goals, you will **select one of the scenarios listed below**. After reviewing the data set provided with the scenario you will do the following:

1. Identify the purpose (and audience) of the scenario and determine what point you want to make with the dataset and how this addresses the scenario.
2. Then, since you can't visualize all the data in your data set, you will make decisions about which data to visualize.
3. Using the data you have selected, you will create three data visualizations to help you make your point.
4. Then you will write about and analyze that data in a brief, *informative*, visual report.

In your visuals, you want to communicate the data you select from your data set in a way that maximizes the impact of the data. Use the textbook chapter on Visual Design ([Ch. 5](#)) to help you design and write about your visuals. Additionally, you may wish to use this [Periodic Table of Visualization Methods](#) to explore various types and uses of visuals.

## DELIVERABLES

- Visual, informational report
- A short 250- to 500-word note that explains the following (use headings to identify each of the topics listed below):
  - Why you selected your scenario
  - How you selected which data to visualize and why you visualized it in the form you did
  - What decisions you made to tailor your report to your audience and your purpose
  - How you ensured that your visualizations of the data were fair, accurate, and clear

## SCENARIO 1

You are an engineering student at USF. Your mentor has asked you to design a report that will recruit students to the engineering major. Your mentor observes that prospective students can range from freshman to older transfer students. Your mentor has tasked you with creating an informative report that will communicate the prospects students have open to them if they pursue a degree in Engineering. You have found data on engineering degrees, which highlight degrees attained in Engineering, those attained within STEM fields, and the different BA degrees earned at post-secondary institutions. You also have found data on salaries for various engineering positions.

The datasets can be found here:

- Table 1
- Table 2
- Table 3
- [Salaries](#)

Take time to familiarize yourself with the data set—identifying trends and/or areas of interest to you. You may wish to consider relationships between degrees and salaries by making connections between the degrees students can earn and what they can do with the degree. Or you may wish to consider how gender and ethnicity impact recruitment.

Then, write a short report that includes data visualizations that can be used to recruit engineering students. Your mentor has tasked you with an audience of prospective students so, as you compose, consider their needs and expectations, and the data that would be most useful.

## SCENARIO 2

You work for DataSecure, Inc., an IT company that helps individuals with cyber security. Booker Williams, your boss, has asked you to write a report that will be used as training materials for incoming customer service representatives. Because the people who will use the report are entry level customer service, they will have customer service experience, but may not be knowledgeable about cybersecurity. Mr. Williams wants you to introduce issues of cybersecurity and help the new employees understand why cybersecurity is important. You have found data on cybersecurity trends to help support your report: Cybersecurity dataset

Take time to familiarize yourself with the data set—identifying trends and/or areas of interest to you. The goal is to select and visualize the data that is most relevant to your audience and the point you are trying to make. Consider what it is you want the audience to know and how you can best visualize the information for them.