CSC/SDS 109: Communicating with Data

Fall 2024

# Final Project: Visualization for Social Good

This is a group assignment, work in groups of 3-5. Groups of different sizes must be pre-approved.

**Goals:**

* **Apply the visualization theories from the semester to a topic of interest to you**
* **Design a visualization through the lens of social good**

## Instructions

**For your final project you will work with classmates to design and create a visualization for social good focused on an area of interest to you. Your final product might be a series of visualizations, a dashboard, or maybe even a video. The final format is up to you and your group. Your final product should communicate data and impact society in a positive way. You can interpret that prompt as you see fit. Maybe you build a visualization that you imagine showing policy makers that highlights housing discrimination in Northampton. Or maybe you build a visualization showcasing the personalities of different Smith houses for future Smithies to explore when deciding where to live. Be creative and choose something important to you!**

**This project is a large portion of your final grade, and is broken up into milestones, described below. Be sure to submit each milestone and to put your best effort into all pieces. Your final project grade will combine all milestone grades.**

Milestone 1: Proposal- 26 points

For your project proposal you will identify your project group, a plan for working together, a topic, a dataset, and an understanding of your data. Type up a document that answers the following questions. Your document should be 1 – 2 pages long and well formatted. Submit your proposal as a group on Gradescope by the due date listed on the course schedule.

1. Group
   1. With whom do you plan to work? Groups must be 3 – 5 members (you must speak with me if you would like to work with a different size group).
   2. Talk about your schedules. Detail a plan for coordinating your work throughout the project.
2. Topic
   1. What topic area will you work with? Why is this area important/interesting?
   2. What is the broader impact of your visualization? I.e. Who would use it and what would they gain?
3. Data
   1. Find the data that you will visualize. You may need to combine multiple datasets, so having more than one is okay. Provide a link to your data source(s).
   2. If you plan to use more than one data source, how will you combine your datasets? What is/are the common identifiers across datasets on which you can link them?
   3. Investigate the source of your data.
      * Who collected it?
      * Who provided the funds for data collection?
      * Why was the data collected?
      * What possible data biases do the answers to these questions highlight?
   4. Which variables in your data will you visualize? How does visualizing those variables relate to your answer to 2.b above?
4. Roadblocks
   1. What roadblocks do you anticipate as you complete this project? Name at least three.
   2. Detail your plan for dealing with these roadblocks. How will you overcome them, or if you cannot, how will you pivot your project?

Points will be awarded for answering each question above fully (each question is 2 points, 0 points will be awarded for missing or nonsensical answers, 1 point for partial answers, and 2 points for complete answers).

Milestone 2: Design & Prototype- 20 points

**You will design your visualization and produce a low-to-medium-fidelity** prototype to bring to class for testing/feedback.

1. User Persona
   1. Revisit the broader impact / purpose of your visualization. Who is the target audience for your visualization?
   2. Write a user persona for your visualization that includes:
      1. A name
      2. The person’s education, lifestyle, interests, values, goals, needs, limitations, desires, attitudes, and patterns of behaviors
      3. Their relationship to technology
   3. Detail a scenario in which your persona uses your visualization. The scenario must include answers to these questions:
      1. Why do they use the visualization? Do they have a specific goal?
      2. How do they interact with the visualization?
      3. What do they gain from using the visualization?
2. Visualization Sketch
   1. Sketch out your visualization in detail. Your sketch must include:
      1. Clear (and appropriate) data – visual channel mappings
      2. Notation where appropriate

Milestone 3: Redesign- 10 points

**Start in class 10/24**

Milestone 4: Final Product & Presentation- 40 points

**Start in class 10/29**

## Submission

Submit your milestones on Gradescope as a group (<https://guides.gradescope.com/hc/en-us/articles/21863861823373-Adding-Group-Members-to-a-Submission>).