

CSC/SDS 109: Communicating with Data

Mid Semester Project: Smithies & Data Humanism

This is a full class assignment, but we'll have roles to make it manageable and practice working with a large group.

Goals:

- Shift thinking from computer-based visualization to physical visualization
- Design a visualization guided by the tenants of Data Humanism

Instructions

For this midsemester project you will work together as a class to create a physical data visualization designed with the tenants of [Data Humanism](#) in mind. We will share the physical visualization with the Smith campus on Project Release Day (see course schedule).

As a class, you will choose the topic of the visualization and the medium with which you wish to build it. For example, in fall 2024 the class carved pumpkins to visualize Smith houses:



Pumpkin Patch Key

Variable	Visual Mapping
Number of residents	One point per resident on back of pumpkin
Building material	Door shape → Brick → Siding → Other
Year oldest part of house was built	Window panes 1 → 1710 - 1759 2 → 1760 - 1809 3 → 1810 - 1859 4 → 1860 - 1909 5 → 1910 - 1959 6 → 1960 - 2009 7 → 2010+
Porch swing?	Shutters Shown → Yes Not shown → No
Elevator?	Stairs Shown → No Not shown → Yes
Affinity house?	Top cut Jagged → Yes Smooth → No
Do you feel a sense of belonging in your house? (Or at Smith if you live off campus)	Clothes pin color Green → Yes Uncolored → Neutral Red → No

In Spring 2024, the class collected data on Smithies' favorite places on campus:



To help organize the work, we will have project roles. You can sign up for whichever project role best suits you (details below). In addition, the project will be broken up into milestones to keep it on track. Each milestone is outlined below.

Milestone 1: Ideation

- Start in class 10/07
- Continue in class on 10/09 & 10/16

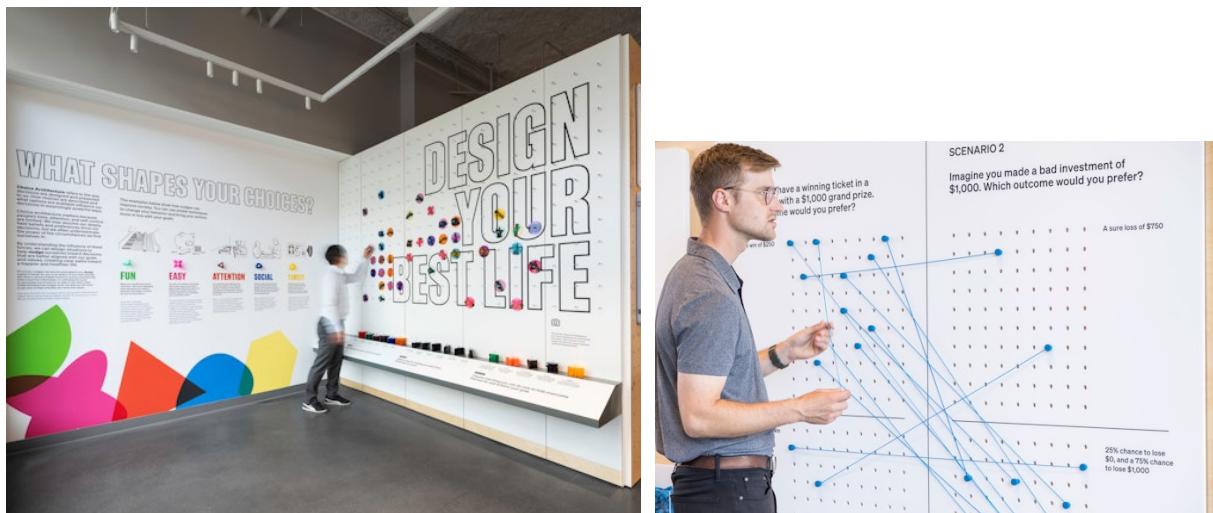
On these days we will discuss design thinking and iterate on ideas for the final physical visualization. This is the brainstorming phase; no idea is a bad idea! Bring your creativity!

For ideation, we will break into groups of ~5. Each group will ultimately generate **one, specific** idea for a physical visualization that will engage the Smith community. Consider the following guiding questions:

1. What do you want the impact of the visualization to be?
2. Broadly, what data would you need?
3. What visual encoding would you use?
4. How will the Smith community engage with the visualization?

Keep in mind the ideas of Data Humanism—embrace complexity, move beyond standards, sneak context in, and remember data is imperfect. In addition, think about how you will cater your visualization to engage the Smith community – Will it be interactive? Will the data be specific to Smithies (or a certain subset of them)? Will folks viewing the visualization learn something new? Do you want viewers to leave with a specific feeling?

You might consider taking inspiration from Georgia Lupi's work (which we explored in class). For example, maybe the physical visualization actively collects data from users and visualizes it like [Lupi's Mindworks installation](#):



Or you might take inspiration from [Data Vandals](#). For example, maybe the physical visualization enables users to “move through” the data on display:



After class on the final day of ideation, sign up for the role you'd like to take for the remainder of the project. Roles, descriptions, and time commitments are listed [here \(section 01\)](#) and [here \(section 02\)](#). (Note: roles are leadership positions needed to make this project work. Your participation in the project will extend beyond the role you choose). Be sure to note the “most active time” for each role.

Milestone 2: Visual Encoding and Data Collection

- In class 10/21

For the first half of class the visual encoding leads will guide everyone through finalization of the physical visualization's data-visual mapping and general aesthetic. They will solicit and incorporate feedback from the class as needed. **Visual encoding leads should come to class prepared to lead this discussion.**

For the second half of class the **advertising team will break off** to design flyers and determine an advertisement plan. Meanwhile, the data collection leads will guide the remainder of the class in data collection. **Data collection leads should come to class with a plan for data collection.**

Milestone 3: Visualization Creation

- In class on 10/23 – 10/30

Before class on 10/23 the data cleaning leads will finalize the data to be visualized.

On these two days class time will be dedicated to building the physical visualization.

Visualization creation leads should come to class with a plan for how to delegate work amongst the class.

After class on 10/30 the visualization set-up leads will guide the visualization set-up extra hands in final assembly of the physical visualization.

Milestone 5: Visualization Display

- After class 10/30

In the evening, the physical visualization will be displayed to the Smith community. **The visualization Q&A team will be present at the display to answer viewer questions and/or to guide viewers through the visualization.**

After the display concludes, the **visualization clean-up leads will guide the visualization clean-up extra hands in clean-up of the visualization display.**

Submission

Answer the project reflection prompts on Gradescope under the Mid-semester Project assignment.

Rubric

The following matches the rubric you will see on Gradescope.

	Missing / Not Complete (0)	Approaching (2)	Meets (4)	Exceeds (5)
Reflection	Not submitted or not readable.	Reflection addresses all questions on Gradescope, but answers are not thoughtful.	Reflection addresses all questions on Gradescope, but answers need more thought.	Reflection addresses all questions on Gradescope thoughtfully and clearly.
Role	Role responsibilities were not filled.	Completed some responsibilities of role.	Completed all responsibilities of role, but more forethought was needed.	Completed all responsibilities of role in an organized, well-planned manner.
Participation	No participation throughout the project.	Present but not engaged. Or absent without communication.	Present but not fully engaged for all in-class working time (or communicated absence ahead of time and made plans to still contribute).	Present and engaged for all in-class working time (or communicated absence ahead of time and made plans to still contribute).