# 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 the fall 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 |

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 outline below.

## Milestone 1: Ideation

- Start in class 02/27
- Continue in class on 03/04

On 02/27 the Design Thinking Initiative (DTI) will join us in class to facilitate project ideation. We will discuss design thinking and begin to iterate on ideas for the final physical visualization.

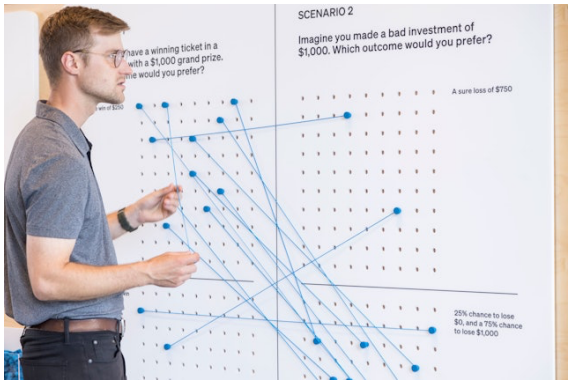
This is the brainstorming phase; no idea is a bad idea!

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. 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:


Be prepared to articulate your specific visualization idea to the class on 03/06. Computer or hand generated sketches illustrating your idea are strongly encouraged. Remember that you'll want a clear data-visual mapping to communicate to your classmates.

After each group has had a chance to share their idea, we will vote on which to pursue.

In addition, ***before class on 03/06***, sign up for the role you'd like to take for the remainder of the project. Roles, descriptions, and time commitments are listed here. (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 03/06

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 03/11 and 03/13

**Before class on 03/11 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 03/13 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 03/13

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). |