# SI649 / EECS 548 Static Viz Project, Winter 2024

**Due date**: Sunday February 25th, 2024 at 11:59pm (Eastern time)

The first mini-project for this course is about making static (as opposed to interactive) communicative visualizations to add detail, context, and nuance to a news article. The article we have selected for this year is about immigration to the US. It includes lots of specific numerical claims, but does not make any use of data visualization.

Your goal in this project is to design and create **three** visualizations to accompany the story, in a way that would benefit the reader. You will do this individually, rather than as a team. You are free to focus on any aspect of this article you like, including regional, national, individual, or other factors, in order to provide greater detail and context. In other words, *don't limit yourself to the specific statistics or studies quoted in the article*.

## Article

The story we are basing this project on is called "Asylum in America, by the Numbers", by Eileen Sullivan, published in the The New York Times on November 21, 2023. You can find a copy in the files on Canvas, or (if you have subscriber access), you can read it online here: https://www.nytimes.com/2023/11/21/us/politics/migrant-crisis-border-asylum.html

## Deliverables

1. Final visualizations:
    - For the final submission, create your final, high-quality visualizations to accompany the article. You should submit these on Canvas as high-resolution PDFs. You are free to implement your visualizations in any way you choose.
2. Final report (written as a short, informal blog post):
    - In addition, to accompany your final submission, you should write a short informal report, (something like a blog post, probably around 5-6 pages of text in total), that describes your process, due on the same day as the final visualizations. *For each of your visualizations*, your report should cover:

    - **Tasks**: What comparisons is your visualization designed to support? What will the viewer learn and take away from it? Remember that a good visualization should be designed to effectively support specific domain tasks, and can typically support multiple tasks, not just one.
    - **Data**: Where did you source the data for this visualization from? What questions or concerns do you have about it? Did you have to process or clean up the data in any way? Is this reflected in your final visualization?
    - **Your design process**: What did you try? (feel free to include screenshots). What examples did you look at for inspiration? (again, screenshots are welcome). The expectation is that you tried multiple things and iterated over your design over the weeks of this project. Describe what you liked or didn't like about your initial design, and how you arrived at your final implementation.
    - **Qualitative self-evaluation**: How would you judge your own design and creation? In what ways is it effective? How could it be improved? Please connect this to principles that you have learned in class.
- Here is an example of a process blog that you may want to refer to as loose inspiration (but please follow the format outlined above, not the format used by this example, and try to be concise): https://www.visualcinnamon.com/2019/04/designing-google-cats-and-dogs/

## Evaluation Criteria

For the final submission, we will be looking at:

1. Relevance to the article: Are your visualizations relevant to the topic? Would they fit naturally as part of the article?
2. Insights: How much do these visualizations add to the reader's understanding, beyond what is already in the article text?
3. Clarity, effectiveness, and functionality: How effective are your visualizations for the tasks you have selected?
4. Aesthetics: Have you used good design principles and considered human perception and cognitive limitations in designing your visualizations?
5. Creativity and effort: How interesting or ambitious are your visualizations? Do they reflect a considerable amount of effort?
6. Writing: how well written, detailed, and reflective is the report?

## Analysis vs Exploration

As you approach this project, try to put yourself in the role of a data journalist. That is, you are both an analyst and a communicator. As an analyst, it's up to you to find interesting things in the data (some of which are suggested by the article content), but you should also think critically about the data and analyze it in a rigorous way. Visualization may be an effective tool in exploring and analyzing the data, but these are not likely to be the visualizations you will submit as your final work (except as screenshots of your process in the blog post). Rather, you should design and create self-contained visualizations (possibly with short accompanying textual descriptions) that will help the reader achieve the learning objectives you define. Thus, in your role as a communicator, you need to put yourself in the mindset of the reader, recognize that they haven't gone through the same work of exploration and analysis that you have, and find a way to effectively communicate the information you want to get across just based on the final visualizations you create.

## Aesthetics

Keep in mind that the final results should have both function and form. That means the visualization should *look* good in the end. You are welcome to use any software you like to augment or touch up your static visualization (e.g., Illustrator, Figma, Inkscape, or even Powerpoint). Just make sure to describe your process in your report.

## Datasets

There is an abundance of data about US immigration online. To get you started, we have included links to several sources from which you may want to get data. In addition, we encourage you to look for additional data relevant to the topic, including in other linked studies and external resources. (Just to make sure to document where you got it from).

Here are some sources you might want to consider:

1. The Foreign-born data tables from the Current Population Survey (CPS) contains many data tables (one per year) on the size of the population by age, sex, nativity, and citizenship status, along with many other details (e.g., education, employment,

etc): https://www.census.gov/topics/population/foreign-born/data/tables/cps-tables.html

2. U.S. Citizenship and Immigration Services (USCIS) has extensive datasets on immigration, asylum claims, employment statistics, processing times, and more: https://www.uscis.gov/tools/reports-and-studies/immigration-and-citizenship-data
3. The Customs and Border Protection (CBP) data portal has downloadable data on border policing and enforcement: https://www.cbp.gov/newsroom/stats/cbp-public-data-portal
4. This yearbook from the Department of Homeland Security (DHS) covers a wide range of aspects such as green cards, those granted asylum or refugee status, and naturalization details. Note that you may be able to find some of these tables elsewhere online as data files: https://www.dhs.gov/sites/default/files/2023-11/2023_0818_plcy_yearbook_immigration_statistics_fy2022.pdf
5. The UN Refugee Agency (UNHCR) has extensive data on refugees globally: https://www.unhcr.org/refugee-statistics/
6. The Migration Policy Institute (MPI) offers has aggregated a variety of statistics on how US immigration has changed over time: https://www.migrationpolicy.org/programs/data-hub/us-immigration-trends

## Data Journalism Examples

You can find many great examples of visualization used to accompany news articles online, and we encourage you to look for more of these for inspiration. To get you started, here are some examples (which does not mean these are all necessarily good or successful). Note that some of these use interaction, which is beyond the scope of this project (you must submit static visualizations as PDFs for this project), but which we talk about and use in the second half of the course:

- Europe's record summer of heat and fires – visualized (The Guardian, link)
- Crime reporting behavior of victims of unlawful police violence in Germany (Daria Babco, link)
- How Americans Think About Climate Change, in Six Maps (The New York Times, link)
- 33 Cool Charts from 2022 (FiveThirtyEight, link)

## Advice

- Start by reading the article about US immigration, and thinking about what kinds of questions you have as a reader. Which of those might you be able to find data for?
- Look for data and see what you can find; note that the most interesting or useful data might require some preprocessing.
- Thinking about both the questions you have and the data you can find, come up with tasks that are relevant to the article, that you might be able to effectively support with a visualization.
- Start by sketching ideas for visualizations, and iteratively improve your design.
- Ask yourself, does this visualization actually add something to the article? Your work doesn't need to be fancy, but it should be thoughtful and strive to support complex reasoning and data. If you're instinct is just make a simple bar chart with two or three bars, that's probably not a great use of one of your three visualizations in this project.
- Pay attention to details and make sure to get the aesthetics right. You may want to customize your work so it doesn't look too generic, or use a consistent styling across all three.
- Keep in mind the design principles we have discussed in class. Ask yourself what Tufte would think, and about the limits of the human perceptual system. Keep asking yourself, how can I improve my designs?
- Don't wait until the last minute! It will take time to find and understand the appropriate data and come up with relevant tasks and effective designs.