Project Progress Report 2

(due May 24th 11:59p.m)

You can start working on the project once your report is accepted and graded by your TA. The entire final project is worth **35%** of your final grade and this report accounts for **10%**. This project is done individually.

Submission Guideline

Download this google doc, fill the table. **Type** your answers, no handwritten answers will be accepted (except for the very last question). Submit it in **PDF** format on Gradescope.

If you need some inspirations please feel free to take a look at:
Showcase of Information is Beautiful Awards
Bloomberg Year In Graphics Review
The Pudding
The New York Times

Project Guidelines

Note: The guideline has been further clarified from Progress Report 1, so double-check whether your dataset choice still satisfies the updated guideline below.

1. You may use more than one dataset, however, regardless if you use one or multiple datasets, your visualizations must make use of at least three following data types - **link, position, and attribute.**
2. You cannot use any dataset from the class (Labs, Assignments, Lecture Exercises)
3. You can make your own dataset (Web scrape etc.) provided point 1. is satisfied.

Part 1 - Story and Narrative

Link to the dataset	https://www.kaggle.com/datasets/salimwid/technology-company-layoffs-20222023-data https://www.kaggle.com/datasets/swaptr/layoffs-2022 These are different datasets on a completely different topic than in Progress Report part 1.

Example item from the dataset	{
	Company: Argo AI,
	Total_layoffs: 150,
	Impacted_workforce: 5,
	reported_date : 7/7/2022
	Industry: Transportation
	Headquarter_location: Pittsburgh,
	Sources: TechCrunch,
	Status: Private,
	Additional_notes: N/A
	}

Story you want to deliver	(a story should be in a form of a list of facts, insights, and messages - refer to the lecture slide) - Demonstrate the cities where layoffs are most frequent - Display the industries that layoffs happen in the most - Show the overall quantity of employees laid off per location, industry, and/or company stage. - Overall show the wide ranging impact that layoffs have and answer questions like where are the layoffs happening, how many people are affected, etc.
Describe your target audience.	(using the questions the lecture slide listed) Familiarity with your topic? - They should be aware of what a layoff is, but other than that, they don't need to be familiar at all with the scope of it as my visualization will explain it Do they care?

	- Yes. If they are looking at the visualization, it will be more impactful if they care and are concerned about layoffs What do you want them to take away? - I want my audience to understand the scope and wide range impact that these layoffs have, and to understand that it could happen to anyone How do they encounter your visualization? - Through social media, layoff websites, etc. Mathematical Background? - They don't need a mathematical background Device? - Any device suffices.
The goal of your project outcome. And why?	(exploratory vs. explanatory) The goal of my project is explanatory. I want to be able to provide my target audience (working professionals) with the ability to understand the scope of the issue that is layoffs. My visualizations are more to provide how wide-ranging the impact of how many people are affected, where the layoffs are happening, etc. It provides general information for the general working professional about this topic.
Narrative structure you plan to use	Interactive Slideshow
Elaborate your choice of narrative structure.	I want to demonstrate different aspects of technology layoffs that the user may not have considered. For example, it could go through a slide aiming to show the sheer quantity of people who are laid off for an industry and then transition to a geographic visualization of where these layoffs are happening.
Narrative genre you plan to use	Magazine Style.

Elaborate your choice of narrative genre.	I want to give the user context behind each of the visualizations, and then for them to get a deeper understanding behind it from my visualizations. For example, it could start with talking about how certain industries were affected more than others in terms of layoffs, and then go to a data visualization that shows how many layoffs have happened in each industry.

Part 2 - Outline

Story you want to deliver	(you can copy/paste from Part 1) - Demonstrate the cities where layoffs are most frequent - Display the industries that layoffs happen in the most - Show the overall quantity of employees laid off per location, industry, and/or company stage. - Overall show the wide ranging impact that layoffs have and answer questions like where are the layoffs happening, how many people are affected, etc.
Specifications on each plot **in the order of how you lay out on your project**	(for each plot, include 1) clear task abstraction, 2) attributes used, 3) marks, 4) channels, and 5) how this plot adds to the story) 1. Plot 1 a. Task: This chart analyzes the trend between industry and total number of layoffs. Doing so will help to show which industries are more prone to having layoffs during this time period. b. Attributes: industry, total # of layoffs c. Marks: area (bar) mark d. Channels: i. Size length channel for # of layoffs ii. Aligned horizontal channel for industry e. How this plot adds to the story: This visualization aims to demonstrate the correlation between industry and total number of layoffs. It will help to give the audience a better sense of what industries are “dangerous” right now in the sense of layoffs. 2. Plot 2 a. Task: This chart analyzes the trend between the number of layoffs and geographic location in the United States. b. Attributes: geographic location (state), # of layoffs c. Marks: shape (states)

	d. Channels: i. Color channel to represent the # of layoffs e. How this plot adds to the story: This visualization aims to demonstrate the correlation between the number of layoffs and where it is happening in the United States. It will help to give the audience a better idea of where these layoffs are happening and if they are potentially in a “dangerous” region. 3. Plot 3 a. Task: This chart analyzes the top 5 companies with the most layoffs per industry. It helps to give the audience an idea of what companies have been really contributing to the layoff numbers b. Attributes: industry, company names c. Marks: areas (circles) d. Channels: i. Color channel to represent if the nodes are an industry of company e. How this plot adds to the story: This visualization aims to demonstrate the top 5 companies per industry that have laid off the most people. These help to give the audience an idea of company names which could be dangerous to work for.
Elaborate the choice of their marks and channels for each vis	- For plot 1, I chose area mark (bars), size length channel for # of layoffs, and aligned horizontal channel for industry. In other words, it’s a bar chart. I thought it would be good to start of simple with a bar chart to just show the sheer number of layoffs per industry. - For plot 2, I chose shape marks (states) and a color channel. This plot is in the form of a choropleth map of the united states, where it shows geographically where the most layoffs are happening in which states. It makes sense that the colors are channels that will be used to convey information. - For plot 3, I chose areas mark (circle) and color channel. This plot is in the form of a node-link, where there exists all the unique industries and the top 5 companies that have laid off the most people for each industry. It makes sense that we would need to distinguish between the company nodes and the industry nodes, so that’s why I chose a color channel. The circle is just to group the company name together inside the shape of a node, which will be a circle.

Following sample answer about a single plot shows how detailed your answers to part 2 should be.

1. Plot 1
    1) Task: This chart a) analyzes trend between Height and Weight of patients with heart diseases and b) locates outliers within the patients
    2) Attributes: Height, Weight
    3) Marks: point mark
    4) Channels:
        - aligned vertical position channel for Height
        - aligned horizontal channel for Weight
    5) How this plot adds to the story:
       My visualizations aim to deliver health characteristics of patients with heart disease. This plot will provide more specific insights on Height and Weight.

Part 3 - Prototype

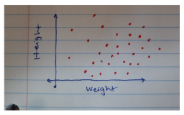
Provide a photo or screenshot of your prototype. A prototype should depict how you place different components of your visualization. You may use pen-paper, or using tools like excalidraw, figma etc.

A basic, barebones sample prototype for this project

Heart Disease in the United States

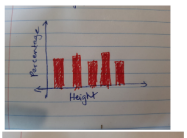
Lading cause of death for men, women, and people of most racial and ethnic groups in the United States.
One person dies every 33 seconds in the United States from cardiovascular disease
About 695,000 people in the United States died from heart disease in 2021—that's 1 in every 5 deaths.
Heart disease cost the United States about $239.9 billion each year from 2018 to 2019.

We will look into how height and weight plays a role in heart disease.

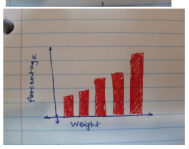


Here, we can see that weight overpowers height in terms of influence on heart disease.
Larger weight compared to height can lead to a person having a larger chance of having a heart disease.
(explanation continues)

From this plot, we can observe that height does not have a significant impact on heart disease.
Height is primarily determined by genetic factors and influenced by nutrition and overall health during childhood and adolescence.
It is important to note that height itself does not directly influence the functioning of the heart or the development of heart disease.
(explanation continues)



On the contrary, weight plays a significant role.
Weight puts a person at risk for type-2 diabetes, sleep apnea, metabolic dysfunction, high blood pressure, which in turn gives rise to heart disease.
(explanation continues)

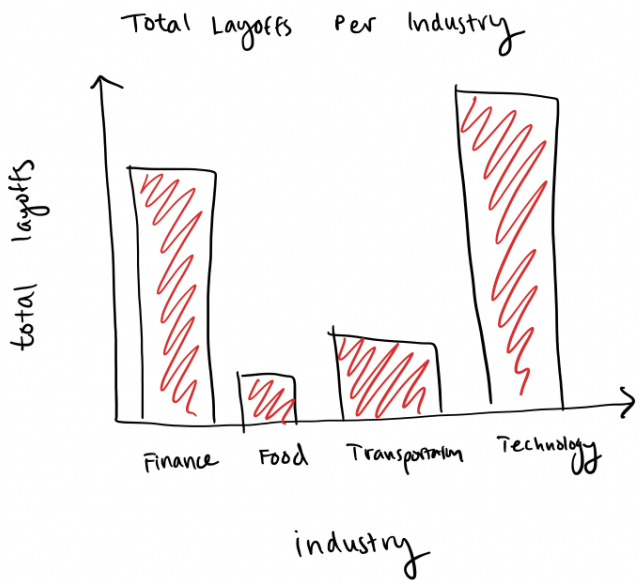


Heart disease continues to be a leading cause of mortality globally, but the good news is that it is often preventable.
By understanding the role of weight in heart disease prevention, you can take proactive steps towards improving your cardiovascular health and enhancing your overall quality of life.

We can use the following strategies for the prevention of heart disease
- Adopt a healthy eating pattern
- Engage in regular physical activity
- Maintain portion control
- Limit sugary drinks and alcohol

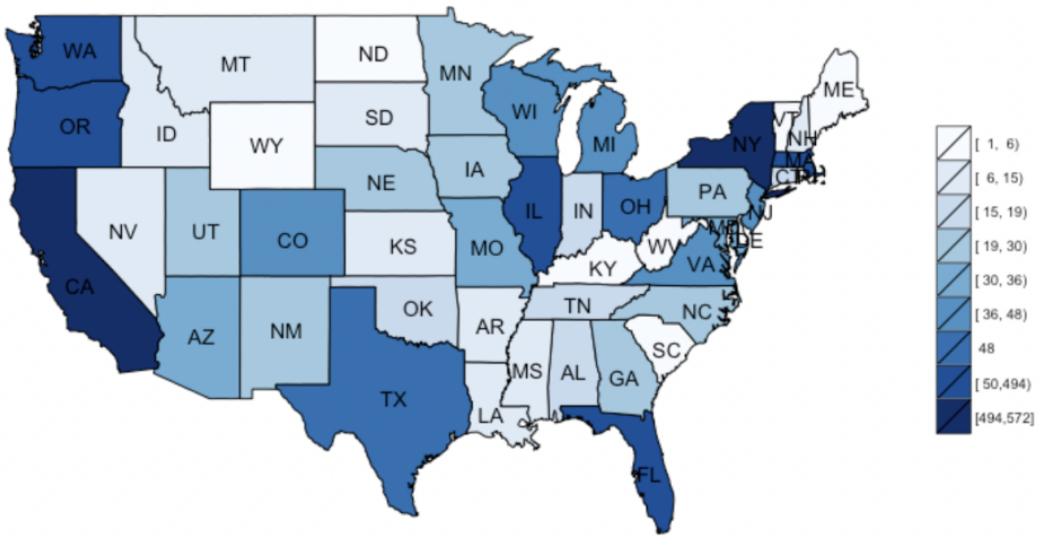
Stay healthy, stay happy!

Plot 1:

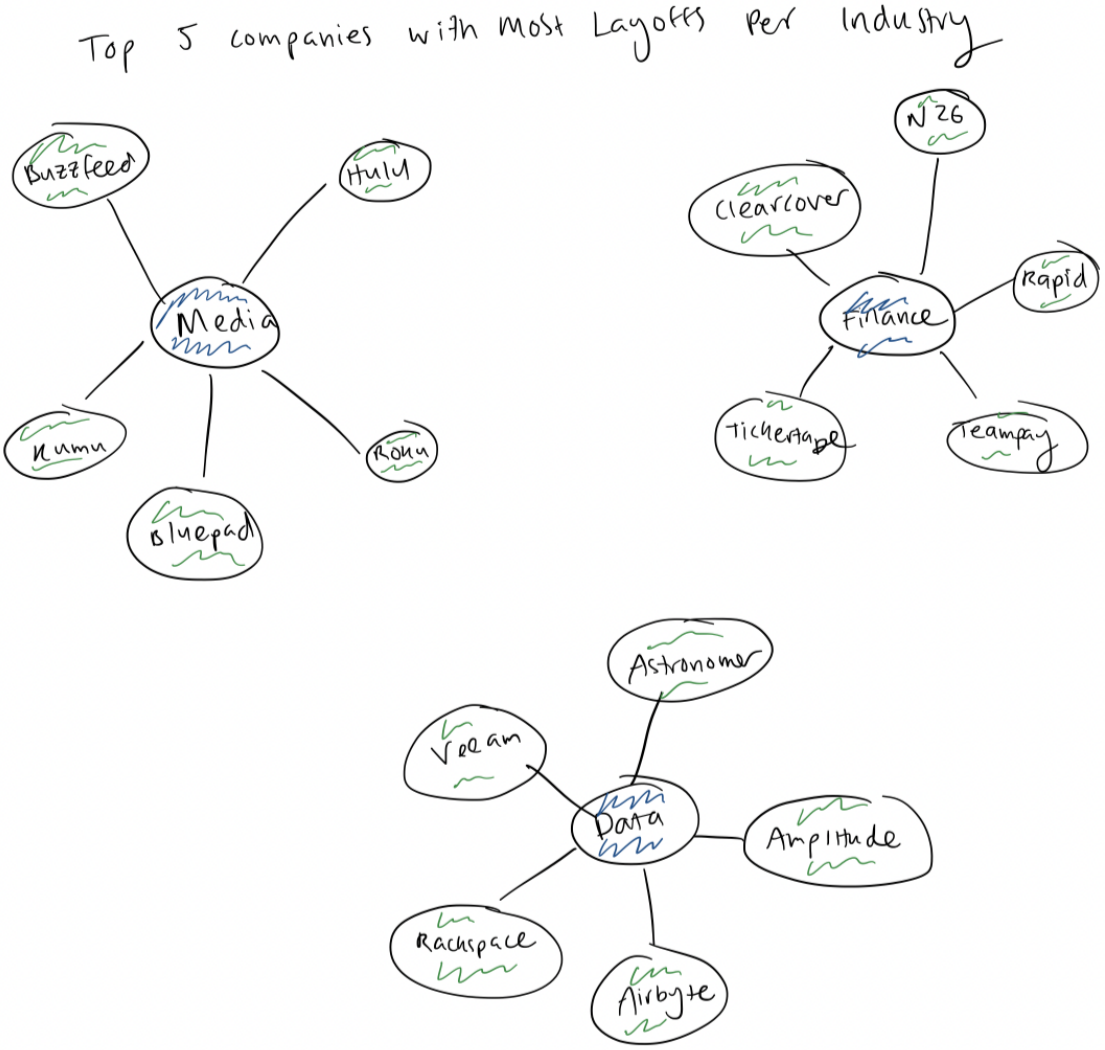


This chart analyzes the trend between industry and total number of layoffs.

Layoffs in the united states (Choropleth map)



This chart analyzes the trend between the number of layoffs and geographic location in the United States. The darker regions will represent higher number of layoffs that have happened in that state.



This chart analyzes the top 5 companies with the most layoffs per industry. The colors are not finalized at all, but there should be a color difference to represent the difference in node meanings (industry and company names).