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/nathanlauga/nba-games?select=teams.csv
Example item from the dataset	Player: LEAGUE_ID: 00 TEAM_ID: 1610612738 MIN_YEAR: 1946 MAX_YEAR: 2019 ABBREVIATION: BOS NICKNAME: Celtics YEARFOUNDED: 1946 CITY: Boston ARENA: TD Garden ARENACAPACITY: 18624 Game: GAME_DATE_EST: 2022-12-22 GAME_ID: 22200477 GAME_STATUS_TEXT: Final HOME_TEAM_ID: 1610612740 VISITOR_TEAM_ID: 1610612759 SEASON: 2022 TEAM_ID_home: 1610612740 PTS_home: 126 FG_PCT_home: 0.484 FT_PCT_home: 0.926
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) Story: - Facts: the total wins in each NBA team starting in 2003 - Insights: By summing up the total wins of each team, I try to provide my audience with some insights about NBA teams and determine the most successful organization in the NBA after 2003 and the winning and losing relationship between them - Message: It is always an ongoing topic to determine the best in the league, so by creating this visualization and using total wins as the metrics, I want to tell my audience

	the most successful team in the league under my rules, and how they perform against each other, which gives the winning and losing relationship between each team
Describe your target audience.	(using the questions the lecture slide listed) Target audience would all NBA fans who are interested in teams' stats would be my intended audience. If they want to determine which organization is the best, they can use my data visualization to figure it out. They are NBA fans, so they are familiar with my topic, since it is always an ongoing topic between fans to determine who is the best or which organization. They care about the organization they are supporting, so I want to give the most straightforward visualization like a geometry map to show them the result. Not all fans have a strong mathematical foundation; however, since I am not doing a complex stats question here, so I think most of them should be able to handle it. They could use either mobile phones or computers to see my result, so I need to make some dynamic adjustments to my visualization, so every device could see my visualization clearly.
The goal of your project outcome. And why?	(exploratory vs. explanatory) The goal of this project would be explanatory. I want to communicate with other NBA fans who might not have a strong statistical foundation, but they all have the passion to know more about NBA. My visualization is to sum up the result and present it to the general to let them know the best team in the NBA under my standard. This focus is on communication with the general public.
Narrative structure you plan to use	I am planning to use an interactive slideshow

Elaborate your choice of narrative structure.	The reason for using an interactive slideshow is that my project topic does not need much interaction with users. All I do is to show users different aspects of data either the total wins of each team or the winning or losing relationship between each team. This process is me leading users to explore the data through narrative navigation.
Narrative genre you plan to use	I am planning to use annotated chart
Elaborate your choice of narrative genre.	The reason for using the annotated chart is that it allows me to deliver straightforward narration information to my reader. Since this is an explanatory study, I want deliver my aggregated result and my thought through annotation directly. Also, I would lead my audience most of the time, so I try to be as clear as possible with the information I provided.

Part 2 - Outline

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) Story: - Facts: the total wins in each NBA team starting in 2003 - Insights: By summing up the total wins of each team, I try to provide my audience with some insights about NBA teams and determine the most successful organization in the NBA after 2003 and the winning and losing relationship between them - Message: It is always an ongoing topic to determine the best in the league, so by creating this visualization and using total wins as the metrics, I want to tell my audience the most successful team in the league under my rules, and how they perform against each other, which gives the winning and losing relationship between each team
Specifications on each plot **in the order of how you**	(for each plot, include 1) clear task abstraction, 2) attributes used, 3) marks, 4) channels, and 5) how this plot adds to the story)

lay out on your project	Plot 1 1) Tasks: Analyze the attribute of total wins for each state and NBA teams belonging to it, so my audience can understand how successful all teams performed in order to determine the best team in the league 2) Categorical attributes- NBA teams Numerical Attributes(quantitative)- all team's total wins 3) Marks: area 4) Channels: - color luminance for the number of wins. More wins come with a darker color - Spatial region for teams in different states, which gives us a categorical attribute 5) How this plot adds to the story: This visualization directly shows my audience which team has the most wins since 2003. It provides specific insights into each team's performance across the years. Plot 2 1) Task: This chart analyzes the winning and losing relationship between each NBA team. Specifically, it tries to identify for each team which opponents they have defeated or lost to the most. 2) Attributes: Categorical attributes- NBA teams Numerical Attributes(quantitative)- each team's wins and losses against other teams Node is each team and the link between them is the winning and losing relationship between them 3) Marks: line mark, 4) Channels: - thickness for the number of wins. - Color to illustrate winning or losing a relationship. If a team wins most on another team, it would be a yellow link to that team; From the other team's perspective, it would be a dark gray color link. (I remove the spatial graph, and choose to only do

	a node-link graph) 5) How this plot adds to the story: This visualization directly shows my audience the winning and losing relationship between each team in NBA, and the spatial location of each NBA team. Plot 3 1) Tasks: Analyze the attribute of wins every year between the best and worst NBA teams (knowing that after the first two visualizations), so my audience can understand how the best team and worst team performed through a direct comparison. 2) Attributes: Categorical attributes- NBA teams; Numerical Attributes(quantitative)- total wins for the best and worst team 3) Marks: line mark 4) Channels: - Vertical Position channel. It demonstrates the height of each bar representing the total wins of each team - Horizontal Position channel. It demonstrates the categorical attributes meaning all the NBA teams. - Color is used to distinguish two different teams 5) How this plot adds to the story: This visualization directly shows my audience which two teams have the most wins and least wins since 2003. This provides indirect information on how successful a team is by directly comparing it with another team. It provides specific insights into the best team performance.
Elaborate the choice of their marks and channels for each vis	Plot 1: By using color luminance, my audience can instantly know which team has more wins and which has fewer. It is a straightforward channel. The spatial region is also useful since this visualization would be a map, and the spatial channel could

	help me to show the state each team belongs. Plot 2: By using the thickness channel, I can directly show my audience how many wins a team has gotten or lost to another team. The thickness would be a good indicator of the number of wins. The color of the link would always help my audience to instantly figure out whether is link represents a winning or losing relationship. (I remove the geo part of this chart, since it is too similar to chart 1. It does not provide valuable information, since all the spatial information is provided in chart 1) Plot 3: By using a vertical position, my audience can instantly know how many wins the best and worst have gained. With this straightforward channel, the information on total wins can be delivered much more efficiently to my audience. The horizontal position attributes show the year starting in 2003. The color of the bar shows the NBA teams which are categorical attributes so that my audience can know which team each bar belongs to.

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 the 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

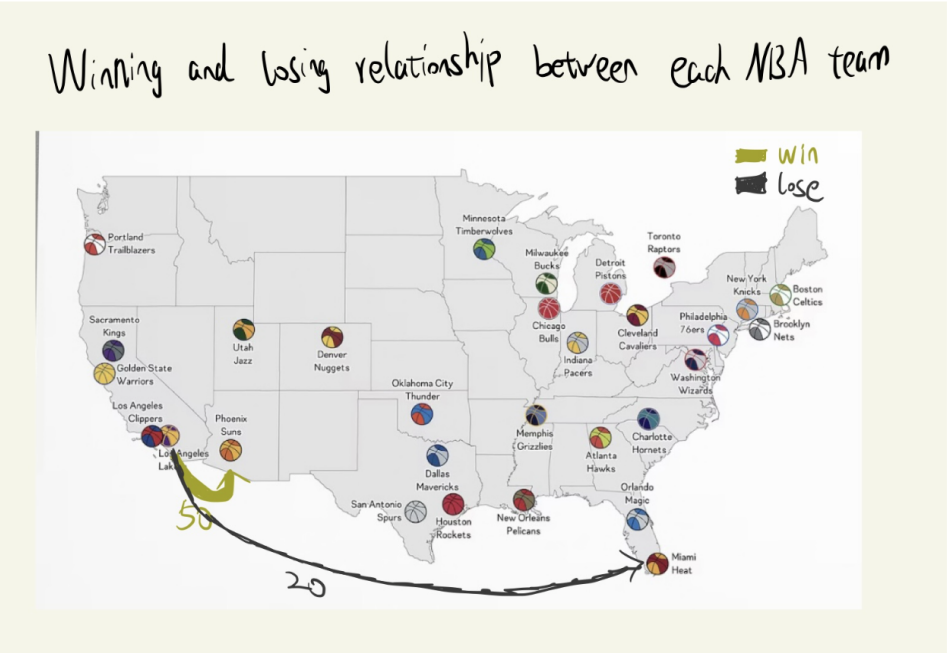
Provide a photo or screenshot of your prototype. A prototype should depict how you place different components of your visualization. You may use pen-paper, or using tools like excalidraw, figma etc.

Which NBA team is most successful after 2003

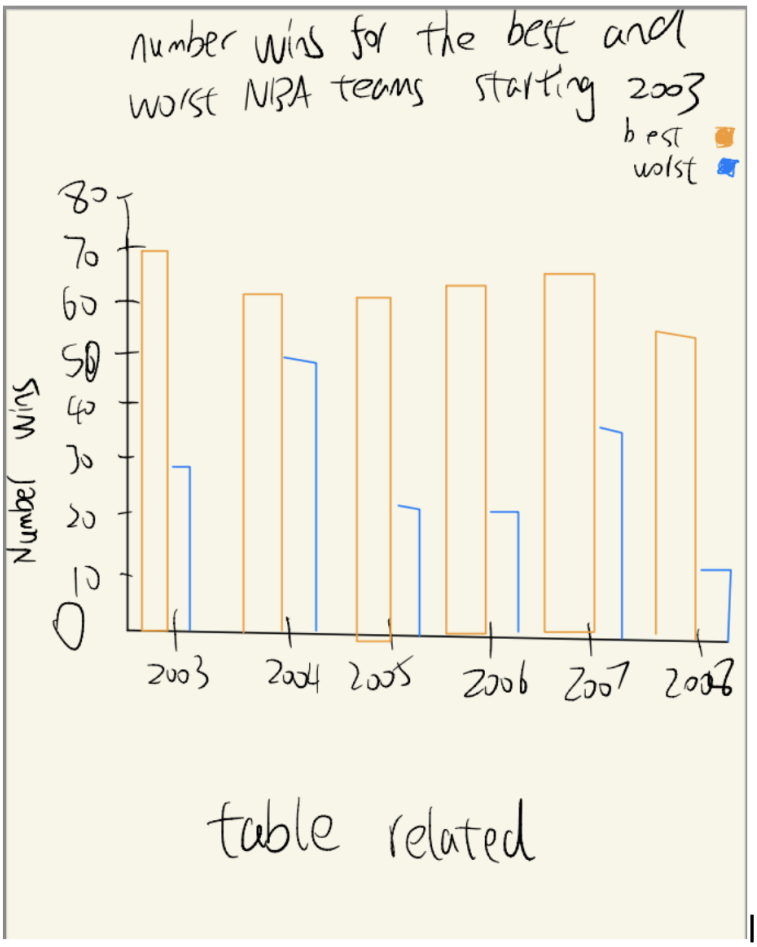
Using the total wins of each NBA team to determine the most successful team in the league. There is an ongoing discussion on the most successful team in the league. Some people say Lakers is the most successful, and others say, Warrior. Since it is such a hot topic, I will use my visualization to figure out the most successful team.

Here we can observe each NBA team's location on an America map, and the color of illuminance indicates the total number of wins for each team. The darker the color, the more wins these teams have gotten.

Here we can observe each NBA team's winning and losing relationship with each other. And the color of the link indicates whether this is a winning or losing relationship. The thickness indicates the total wins of each team against one specific team or total lost to another team.



Here we can use a bar chart to compare the performance of the best and worst teams starting 2003. This is an indirect way to shows how the best team performs. In this case, I have used the total wins to determine the best team, and determine the its winning and losing relationship, and I have track the history of this best team. With all that, it should give my audience a good estimation on the best team in the league over the year.



As NBA's influence keeps growing globally, the discussion of who is the best player or which is the best team is never going to end. I hope I can use my charts to illustrate to my audience one way to approach this question.