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/thedevastator/airbnb-prices-in-european-cities https://www.kaggle.com/datasets/thedevastator/airbnb-price-determinants-in-europe
Example item from the dataset	(see table below)

Price	Room Type	Person_capacity	Host_is_super host	Cleanliness_rating	guest_satisfaction	dist_from_metro	dist_from_city_center	Longitude	Latitude	Region
570	Entire home/apt	2	FALSE	10	9.8	1.59	5.3	-0.16032	51.4653	Iwade

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)

Facts:
- The dataset includes Airbnb listings in London, containing information such as price, room type, person capacity, host superhost status, cleanliness rating, guest satisfaction overall, distance from the city center, distance from the closest metro station, longitude, latitude, and whether it's a weekend stay.
- The project aims to visualize the data to gain insights into the Airbnb market in London.

Insights:
- By comparing prices and ratings across different regions in London, we can identify variations in pricing and quality of accommodations, allowing users to make informed decisions.
- Exploring overall guest satisfaction ratings can reveal the living place with the highest and lowest satisfaction levels, providing valuable information for potential guests.

Messages:
- London residents and travelers can use this project to gain a deeper understanding of the Airbnb market in the city, helping them make better choices regarding accommodation options.
- The project aims to present the data in an engaging and interactive manner, enabling users to explore and understand the Airbnb market in London more effectively.
- The project seeks to empower users to make well-informed decisions by providing valuable insights and information about pricing, room types, guest satisfaction, and geographical distribution of Airbnb accommodations in London.

Describe your target audience.	(using the questions the lecture slide listed) This project is designed for both residents of London and travelers interested in understanding the Airbnb market in the city. They must be familiar with the topic. Since residents in London is familiar with the city, which leads to familiarity of the house price overall London. Also, if they have visitors, they need to find a place for their visitors to live. For travelers, they must take a look at the renting fee to better save their money. I believe both of two types of people care about the topic a lot. For key points I want them to take away, London residents can gain insights into the pricing trends, room types available, and overall satisfaction levels in different regions of the city. Travelers planning a trip to London can use this information to make informed decisions about their accommodation options. My visualization will be easily to understand, and people who see it will have fun playing with it. The visualization will require some mathematical background. I will post the visualization on the website, so people can watch them on their electronic devices.
The goal of your project outcome. And why?	(exploratory vs. explanatory) Explanatory Goal: The explanatory goal of this project is to provide clear and concise explanations of the Airbnb market in London. At this point, we are focusing on people. We aim to present the data in a structured and organized manner, highlighting key findings and insights to make it easier for our audience to read and understand. Through carefully designed visuals and summaries, we will explain the relationships between variables such as price, room types, guest satisfaction, cleanliness ratings, and geographical distribution. The explanatory aspect ensures that users can easily grasp the main takeaways from the data and make informed decisions based on the presented information.
Narrative structure you plan to use	Martini-glass Structure

Elaborate your choice of narrative structure.	Martini-glass Structure means guidance first, then exploration. It is designed to achieve the project goal and engage users effectively. It starts with an introduction to create interest, followed by a descriptive analysis to provide an overview. The regional comparison and guest satisfaction sections offer insights into pricing, quality, and guest experiences. The new data insights section uncovers additional patterns, while the geographical representation provides a visual understanding of the market. The exploitation part can give audience a totally fresh point of view to consider the topic. The conclusion summarizes the findings and encourages users to leverage the insights for decision-making. This structure balances information presentation and user exploration, ensuring a concise and engaging experience.
Narrative genre you plan to use	Annotated Chart
Elaborate your choice of narrative genre.	By using annotated chart, we can combine informative and interactive graphs, the narrative genre aims to strike a balance between providing meaningful information and engaging users in a participatory manner. It enables users to absorb the presented information while also empowering them to explore and discover insights that are personally relevant to them.

Part 2 - Outline

Story you want to deliver	(you can copy/paste from Part 1) Facts: • The dataset includes Airbnb listings in London, containing information such as price, room type, person capacity, host superhost status, cleanliness rating, guest satisfaction overall, distance from the city center, distance from the closest metro station, longitude, latitude, and whether it's a weekend stay. • The project aims to visualize the data to gain insights into the Airbnb market in London. Insights: • By comparing prices and ratings across different regions in London, we can identify variations in pricing and quality of accommodations, allowing users to make informed decisions. • Exploring overall guest satisfaction ratings can reveal the living place with the highest and lowest satisfaction levels, providing valuable information for potential guests. Messages: • London residents and travelers can use this project to gain a deeper understanding of the Airbnb market in the city, helping them make better choices regarding accommodation options. • The project aims to present the data in an engaging and interactive manner, enabling users to explore and understand the Airbnb market in London more effectively. • The project seeks to empower users to make well-informed decisions by providing valuable insights and information about pricing, room types, guest satisfaction, and geographical distribution of Airbnb accommodations in London.

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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) Plot 1: Guest Satisfaction Map 1. Task Abstraction: Visualize the living place with the highest and lowest overall guest satisfaction on a map. Showing the average satisfaction score distribution in London. 2. Attributes Used: Region, Overall Guest Satisfaction Rating, Latitude, Longitude. 3. Marks: Points (when clicking on the button "show the points"), Area 4. Channels: Color of the areas represent the average guest satisfaction rating. 5. How This Plot Adds to the Story: This plot visually identifies the living place with overall average guest satisfaction distribution. By mapping these places, users can see their locations and understand the geographical distribution of guest satisfaction. Plot 2: Scatter Plot of Price vs Guest satisfaction 1. Task Abstraction: Compare the price and guest satisfaction. And visitors and choose their budget intervals to check the satisfaction score via buttons below the graph. 2. Attributes Used: Satisfaction, Price. 3. Marks: Point. 4. Channels: Position on common scale. 5. How This Plot Adds to the Story: In addition to satisfaction, I will also care about the price of the accommodation. When I'm planning my trip, I only focus on houses that are within my budget. So here is the scatter plot of price and satisfaction score with buttons to easily check your budge interval. Plot 3: Advantages of Different Accommodation Areas 1. Task Abstraction: The network shows the pros and cons of different accommodation areas. 2. Attributes Used: Cleanliness Rating, Distance from City Center, Room Type, Host_is_superhost. 3. Marks: Points, lines 4. Channels: Color, Spatial region (The thickness of the line). 5. How This Plot Adds to the Story: London is a big and bustling city, living in different places will have different advantages and disadvantages. For example, living in the city center can enjoy convenient transportation, but at the same time may not be too safe. If you live far from the city, you may live in a larger place and have better privacy, but you may need to take a taxi to visit the attractions, so there will be an extra commuting cost. The following network shows the pros and cons of different accommodation areas.

Elaborate the choice of their marks and channels for each vis	Plot 1: Guest Satisfaction Map • Marks: Points on a map. Using points to represent each London Airbnb home can display the visualization more directly. I also use areas as marks (showing different regions in London) since it makes visualization clear. • Channels: Different colors means different average satisfaction score. Plot 2: Scatter Plot of Price vs Guest satisfaction • Marks: points are used to represent each London Airbnb home. I choose points because it is clear enough to show the relationship between price and guest satisfaction. • Channels: Position on the x-axis represents the satisfaction score, Position on the y-axis represents the price. Plot 3: Advantages of Different Accommodation Areas • Marks: Points represents the region name, benefits and the disadvantages(they are separated by color). Lines are used to link the region and its aspects(both disadvantages and benefits). • Channels: Colors are used to separated region names, benefits, and disadvantages. The thick of the lines are used to represent the price of that region. The thicker the lines are, the higher the price is.

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

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|---|
| 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. You can use pen-paper, or using tools like excalidraw, figma etc.

Plot 1
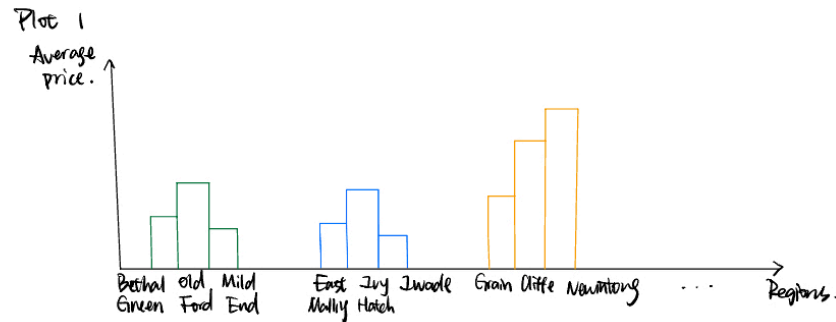
A grouped bar chart with the x-axis representing the different regions in London and the y-axis representing the average or median price. The bars will be grouped by region, allowing users to compare the prices across regions visually.
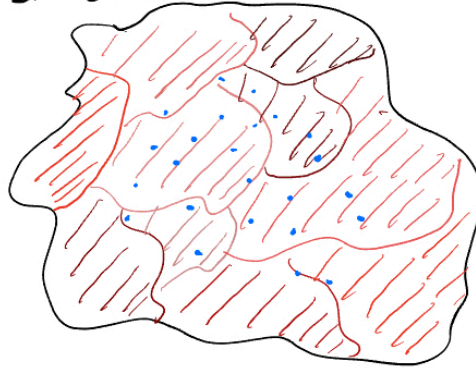
Plot 2
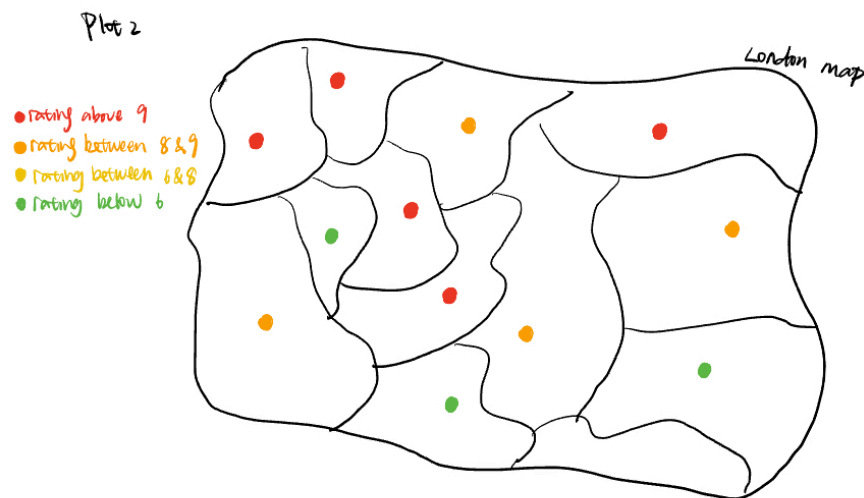
An interactive map of London with points or markers representing different regions. The color of the points will correspond to the guest satisfaction rating, allowing users to visualize the variations in guest satisfaction across different areas.
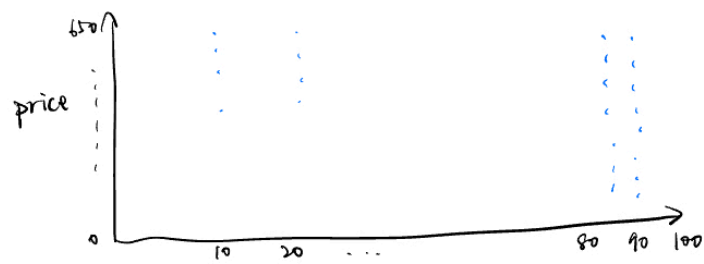
Plot 3
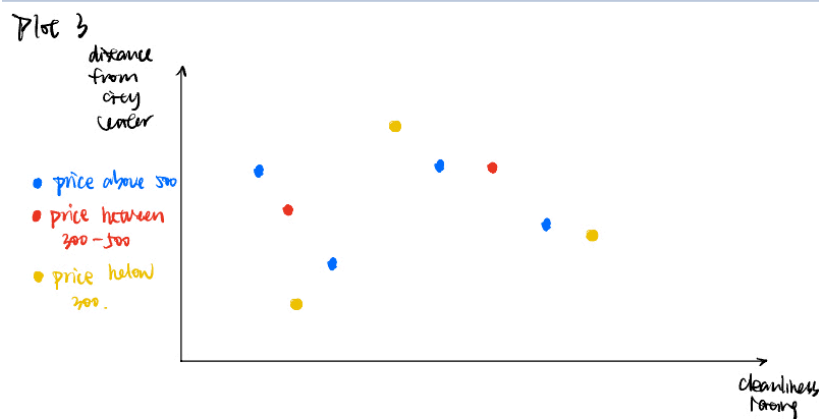
A scatter plot or bubble chart with the x-axis representing the cleanliness rating, the y-axis representing the distance from the city center, and the marker color representing the price. This visualization will allow users to explore the relationships between cleanliness, distance, and price and identify any patterns or trends.

Plot 1. Satisfaction Score Distribution.

Plot 2 Scatter Plot of Price vs Guest Satisfaction

Plot 3 Advantages in different region