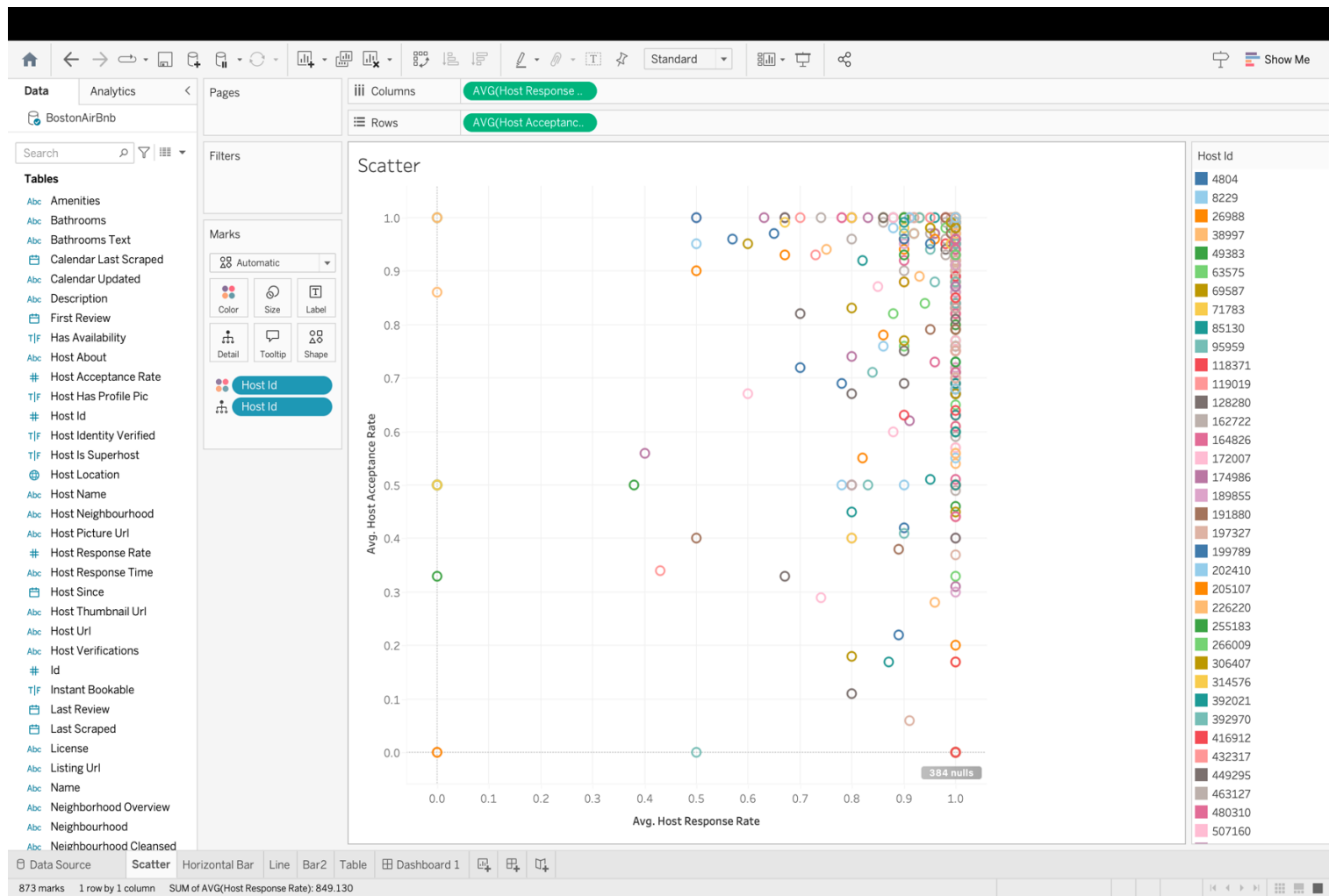# Final Exam STDV

First Visual: Scatter Plot - Host Response Rate vs. Host Acceptance Rate

Story:

Hosts with higher response rates tend to have higher acceptance rates. This suggests that timely communication is crucial for attracting guests.

Description:

1. A scatter plot displaying the relationship between host response rate and host acceptance rate.
2. Each data point represents a host.
3. Tooltips provide additional information about each host like host ID.
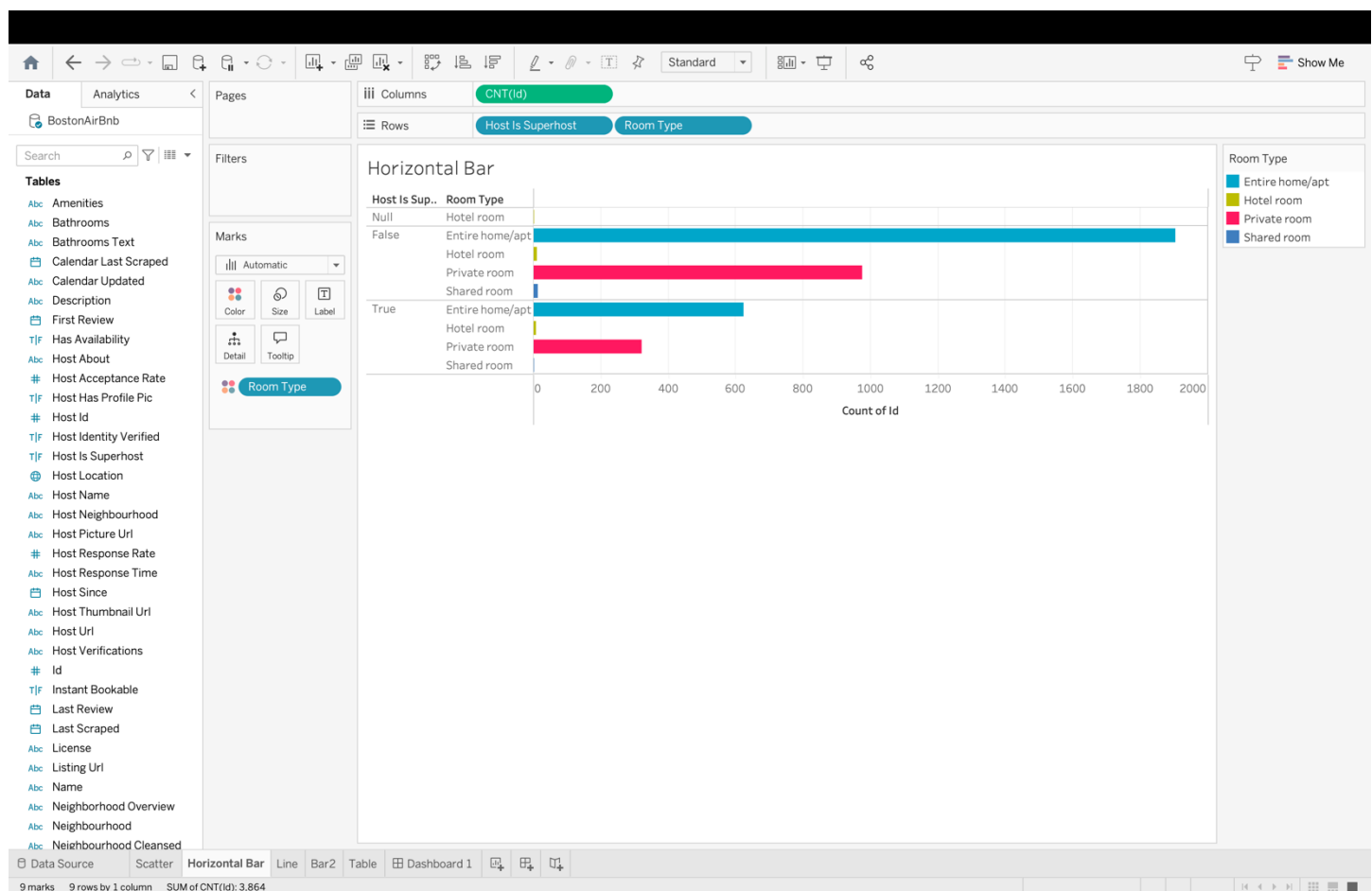
Design Methodologies:

Gestalt Principles: The principle of similarity is applied by using distinct colors for each host, making it easy to differentiate between hosts. The principle of proximity helps identify clusters of hosts with similar performance.

Audience Considerations: The scatter plot provides detailed insights while being easily interpretable. The axes are clearly labeled, and the use of color helps in distinguishing between different hosts.

Second Visual: Horizontal Bar Chart of Room Types by Superhost Status

Story:

For Airbnb hosts and potential hosts in Boston, this visual highlight the popularity of different room types and the impact of being a superhost. It's clear that "Entire home/apt" is in high demand, and while superhosts have fewer listings, their presence is significant in each room type category.

Description:

This horizontal bar chart visualizes the count of Airbnb listings in Boston by room type and whether the host is a superhost. The chart shows that "Entire home/apt" is the most common room type for both superhosts and non-superhosts, with a notable higher count for non-superhosts. The "Private room" category is the second most popular, followed by "Shared room" and "Hotel room".

Design Methodologies:

Gestalt Principles: The visual uses the principle of similarity by employing consistent colors for each room type, making it easy to distinguish between categories. The principle of proximity is used to group the bars by superhost status, facilitating comparison.

Audience Considerations: The color scheme is intuitive and accessible, ensuring clear differentiation between room types. The horizontal layout makes the visual easily readable, especially for users who may prefer scrolling through data horizontally.

Third Visual: Line Chart of Price Updated by Number of Beds

Story:

This visual is useful for hosts and property investors, as it indicates the pricing expectations for listings based on the number of beds. Understanding this trend can help in setting competitive and profitable prices for their properties.

Description:

This line chart shows the relationship between the average updated price of Airbnb listings and the number of beds available. It highlights trends in pricing relative to the number of beds, revealing that listings with more beds tend to have higher prices.
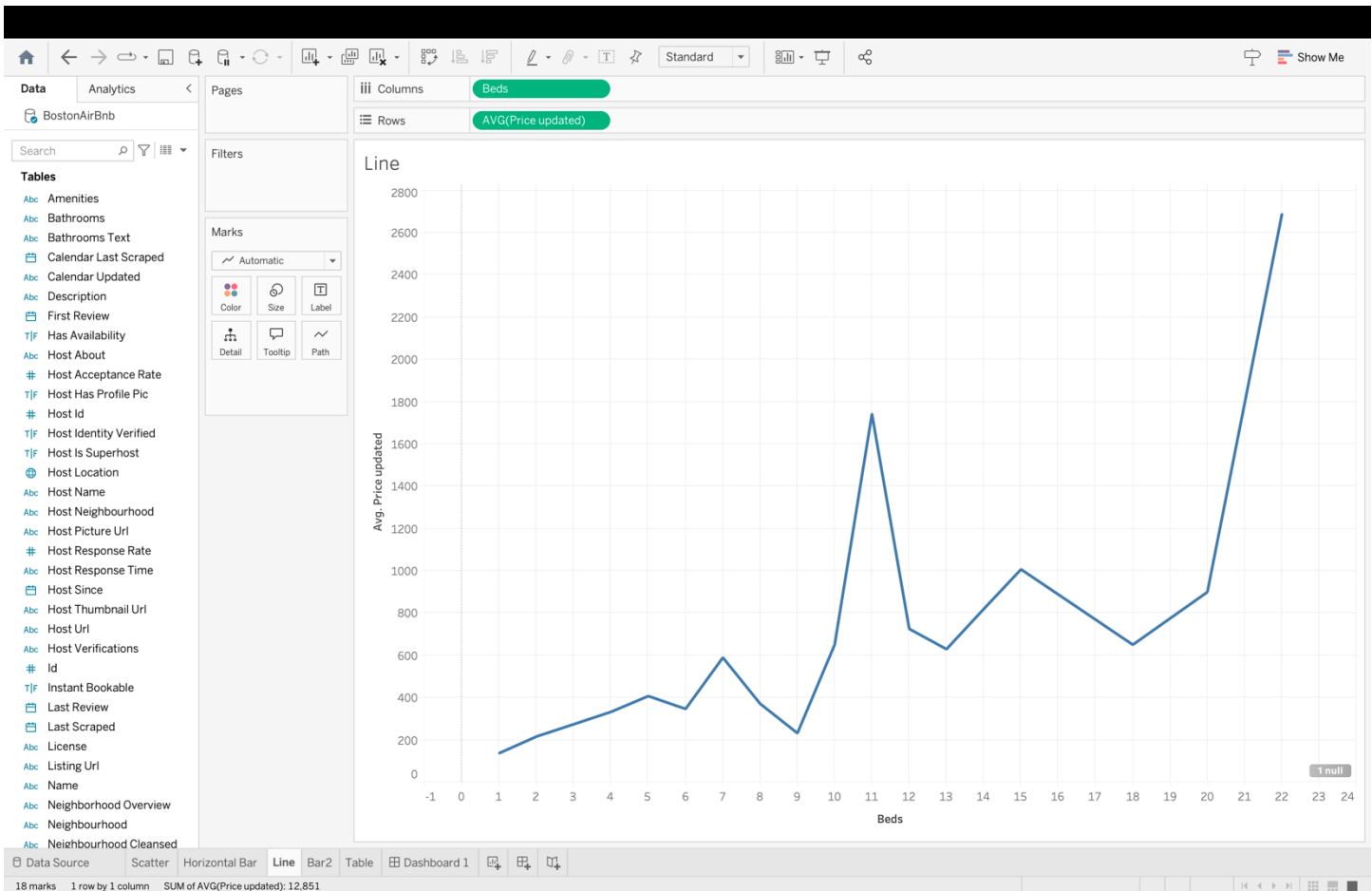
Design Methodologies:

Gestalt Principles: The principle of continuity is evident in the smooth progression of the line, which helps viewers follow the trend across different numbers of beds.

Audience Considerations: Clear labeling of the axes and a simple design make the chart accessible and easy to understand. The use of a single color for the line emphasizes the trend without overwhelming the viewer with unnecessary details.

Forth Visual: Bar Chart - Average Price by Host Location

Story:

This map provides a geographical overview of pricing variations. It helps identify regions with higher or lower average prices, potentially influencing pricing strategies for hosts in different areas.

Description:

This horizontal bar chart displays the average price of accommodations by host location. Locations are arranged in descending order of average price, with Belvedere Tiburon, CA being the most expensive. The chart helps users quickly identify and compare the most and least expensive locations.
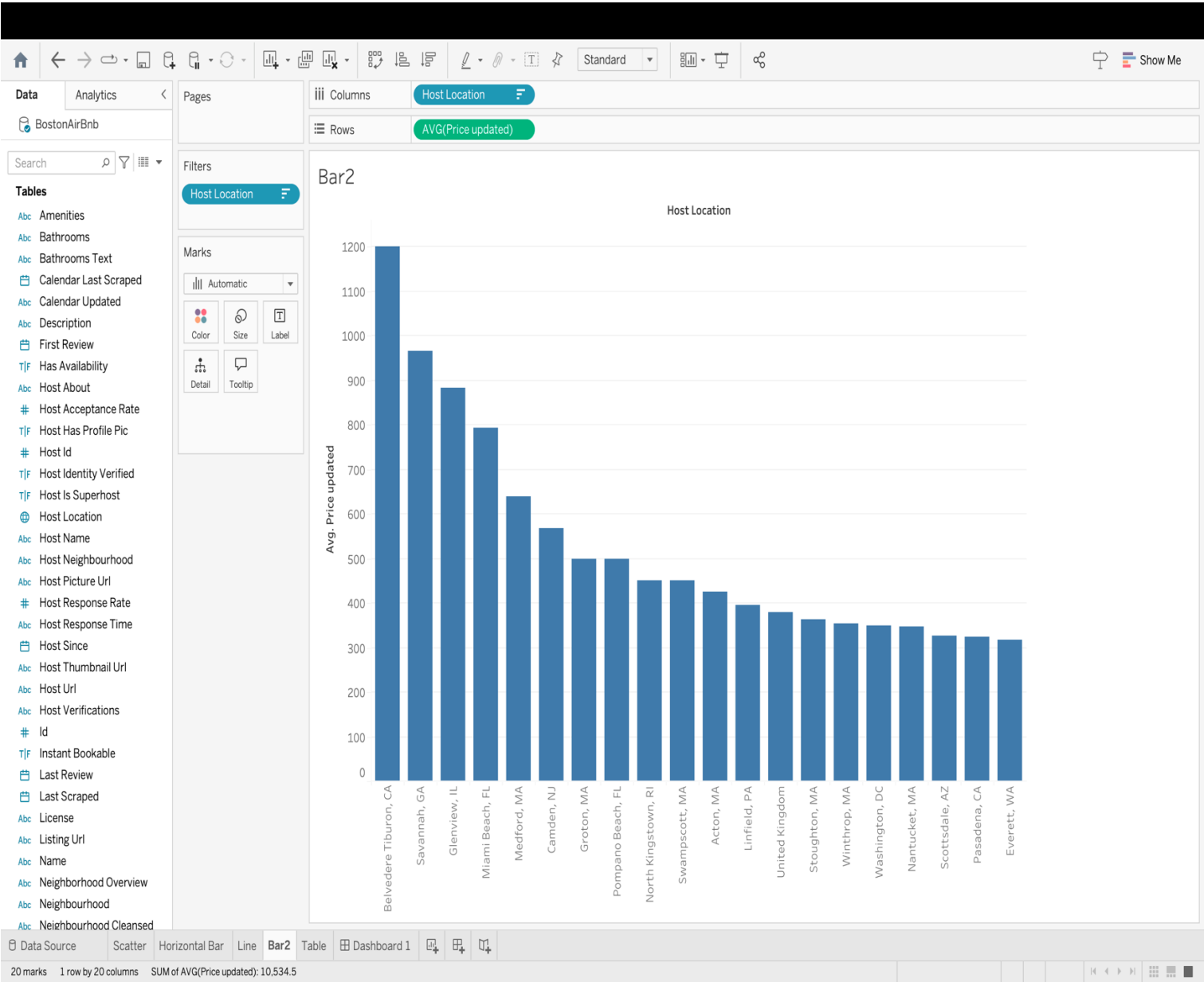
Design Methodologies and Audience Considerations:

- **Gestalt Principles:** The principle of similarity is used with uniform bar colors, making it easy to focus on the length of the bars for comparison.
- **Color Usage:** A single color ensures the emphasis remains on the bar lengths rather than being distracted by different colors.
- **Target Audience:** Designed for travelers planning their trips or researchers analyzing cost trends across different locations, providing a clear comparison of average prices.

Fifth Visual: Average Price by Room Type

Story:

Sharing a room with strangers will help you spend less. This chart breaks down average prices by room type, helping you find the perfect balance of comfort and cost for your Boston stay.

Description:

This map visualizes the average price of different room types (Entire home/apt, Hotel room, Private room, Shared room). The intensity of the color represents the average price, with darker shades indicating higher prices. Hotel rooms have the highest average price, followed by Entire home/apt, Private room, and Shared room.
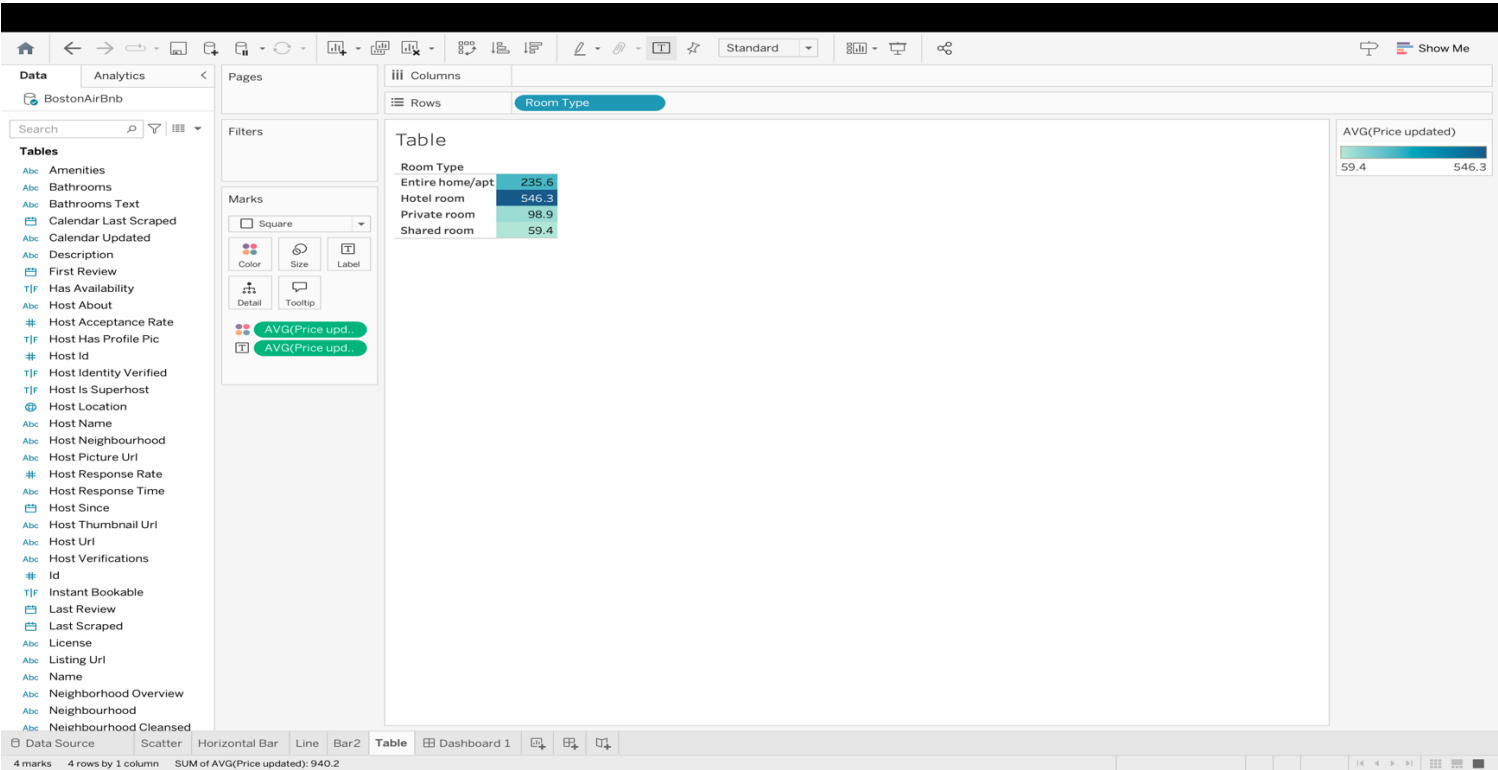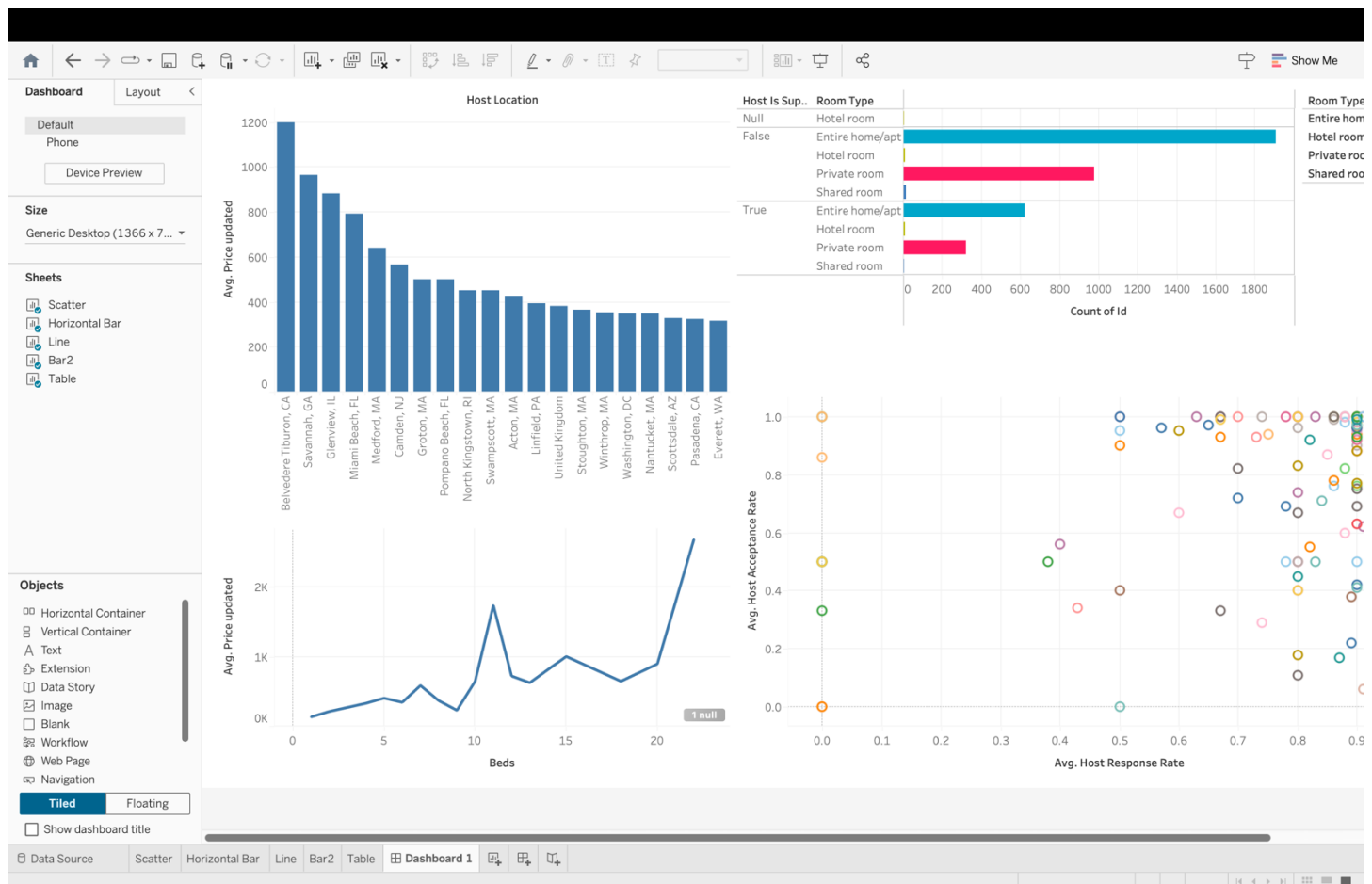
Design Methodologies and Audience Considerations:

- **Gestalt Principles:** The principle of similarity is utilized with consistent color intensities, making it easy to compare prices across room types.
- **Color Usage:** Color gradients help in distinguishing the price differences, providing a quick visual comparison.
- **Target Audience:** This visual is aimed at potential guests looking for accommodation pricing based on room type, as well as hosts analyzing pricing trends for different room types.

Dashboard:

Description:

The dashboard combines various visuals to provide a comprehensive view of the accommodation market. It includes a horizontal bar chart, a segmented bar chart, a line chart, and a scatter plot. The dashboard allows users to explore different aspects of the data, such as price trends, room type distribution, and host performance metrics.

Design Methodologies and Audience Considerations:

- **Gestalt Principles:** The principle of proximity is applied by placing related visuals close to each other, enhancing the user's ability to make connections between different data points.
- **Interactive Elements:** Filters and selectors enhance user experience by allowing them to focus on specific data segments.
- **Target Audience:** The dashboard is designed for a broad audience, including tourists, hosts, and platform administrators, providing insights into accommodation pricing, availability, and host behavior.

Other deliverables

My goal in creating these graphics was to provide the lodging market statistics in an understandable and comprehensible manner. Throughout the process, the right chart types had to be chosen for each component of the data, and their design had to take the demands of the audience into consideration. Making sure the graphics were both useful and simple to understand at a glance was one of the biggest challenges.

The data yields insights such as the identification of high-priced areas, the distribution of room types and superhost statuses, and the connection between price and accommodation features (e.g., number of beds). Since the selected audience persona encompasses both prospective visitors and hosts, the graphics are pertinent for use in both property management and travel planning decision-making processes.

All in all, the graphics followed industry standards for data visualization and audience interaction while offering practical insights and a thorough grasp of the lodging business.