AIRBNB NYC

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Introduction

Airbnb, Inc. is an American company that operates an online marketplace for lodging, primarily homestays for vacation rentals, and tourism activities. Airbnb provides a platform for hosts to accommodate guests with short-term lodging and tourism-related activities.

New York City is the most diverse and populated city in the United States. The city is made up of 5 burrows: Manhattan, Brooklyn, Queens, the Bronx and Staten Island, all of which were "grouped" together into a single city. It is widely recognized as the global centre for the financial services industry. It's also the heartbeat of the American media, entertainment (along with California), telecommunications, law and advertising industries.

Problem statement

For the past few months, Airbnb has seen a major decline in revenue. Now that the restrictions have started lifting and people have started to travel more, Airbnb wants to make sure that it is fully prepared for this change.

So, analysis has been done on a dataset consisting of various Airbnb listings in New York.

Objective

Understand customer preferences and customer experience in airbnb listings

The presentation will focus on understanding the preferences and experiences of customers using Airbnb listings. This includes analyzing factors that influence customer decision-making and satisfaction with their Airbnb stays.

Understand the pricing relation to various parameters

The presentation will also examine the relationship between Airbnb listing prices and various factors, such as location, amenities, and property type. This analysis will provide insights into how pricing is determined and how it impacts customer choices.

Recommendations to improve quality of new acquisitions and customer experience

Based on the insights gained from the analysis, the presentation will provide recommendations to Airbnb on how to improve the quality of new property acquisitions and enhance the overall customer experience for Airbnb users.
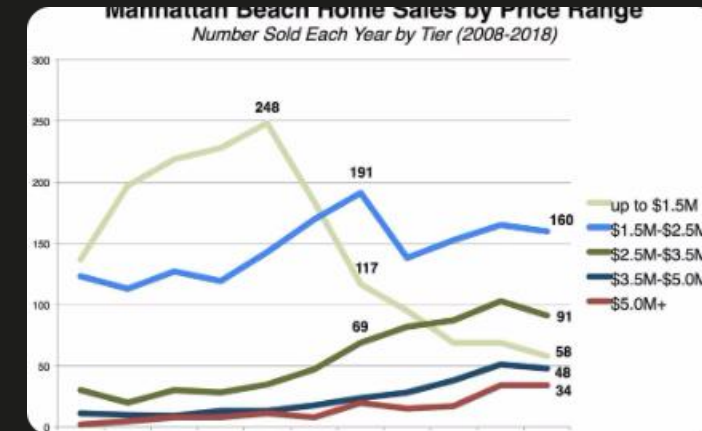
Key Insights

Customer Preference for Neighbourhood

To understand some important insights we have explored the customer preference for neighbourhood and room type.

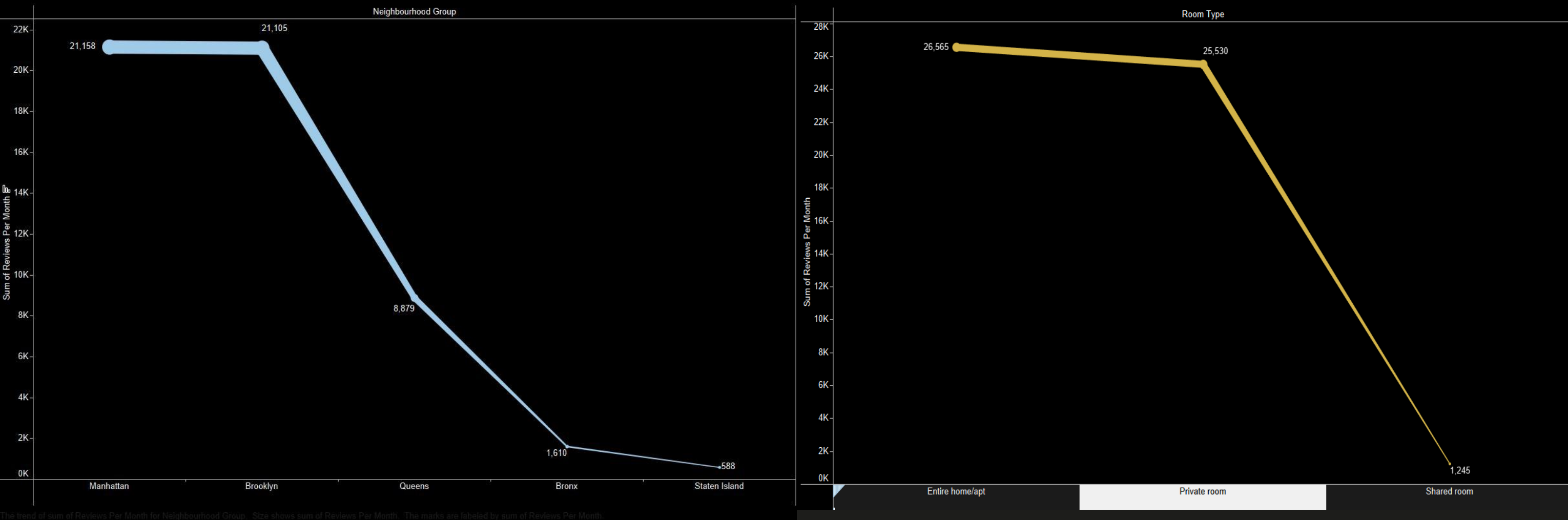## Property Demand Based on Minimum Nights

We have also explored the property demand based on the minimum nights offered.
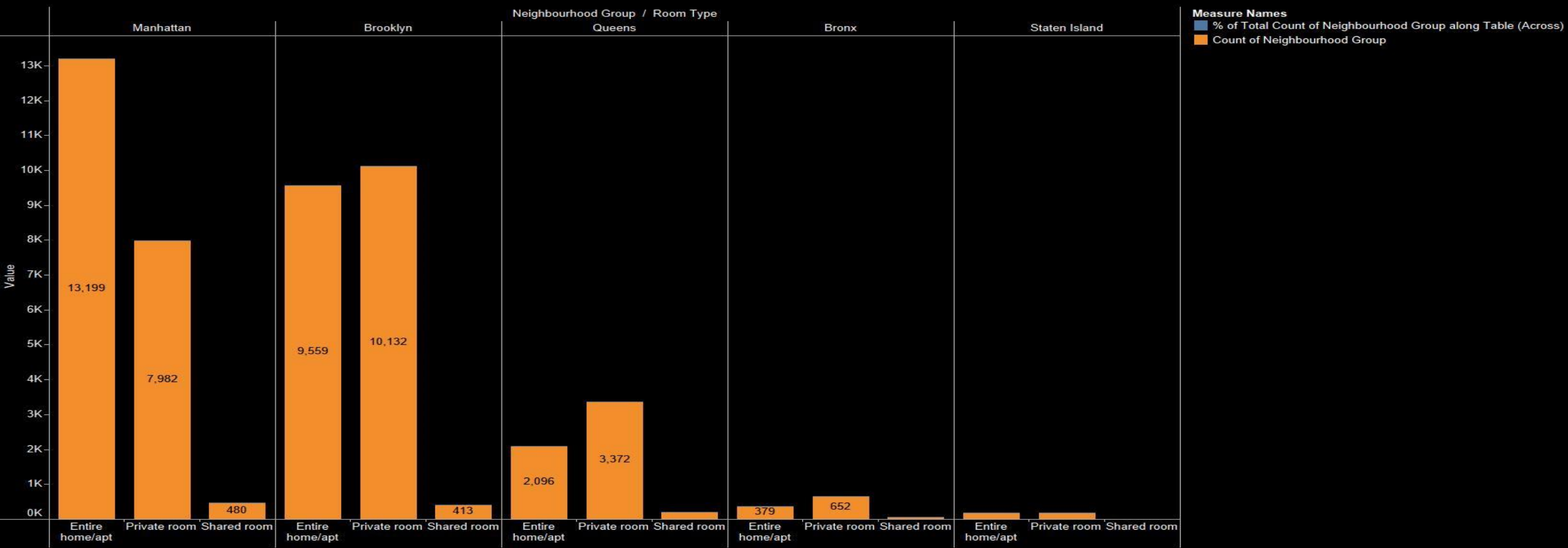

Price Range Preferred by Customers

Additionally, we have looked into the price range preferred by customers.

Customer preference for neighbourhood

- There are three types of rooms - Entire home/Apartment, Private room & shared room. Customers prefer **private rooms** or **entire homes** in comparison to shared rooms.

- Also, we can see **maximum reviews** in listings for **Manhattan & Brooklyn**, implying that more bookings happen in these neighbourhoods.(The higher number of customer reviews imply higher satisfaction)

Customer preference for neighbourhood w.r.t Room type

Neighbourhood Group / Room Type

Measure Names
- % of Total Count of Neighbourhood Group along Table (Across)
- Count of Neighbourhood Group

Manhattan
- Entire home/apt: 13,199
- Private room: 7,982
- Shared room: 480

Brooklyn
- Entire home/apt: 9,559
- Private room: 10,132
- Shared room: 413

Queens
- Entire home/apt: 2,096
- Private room: 3,372

Bronx
- Entire home/apt: 379
- Private room: 652

Staten Island

Shared Rooms

Airbnb can concentrate on promoting shared rooms with targeted discounts to increase bookings.
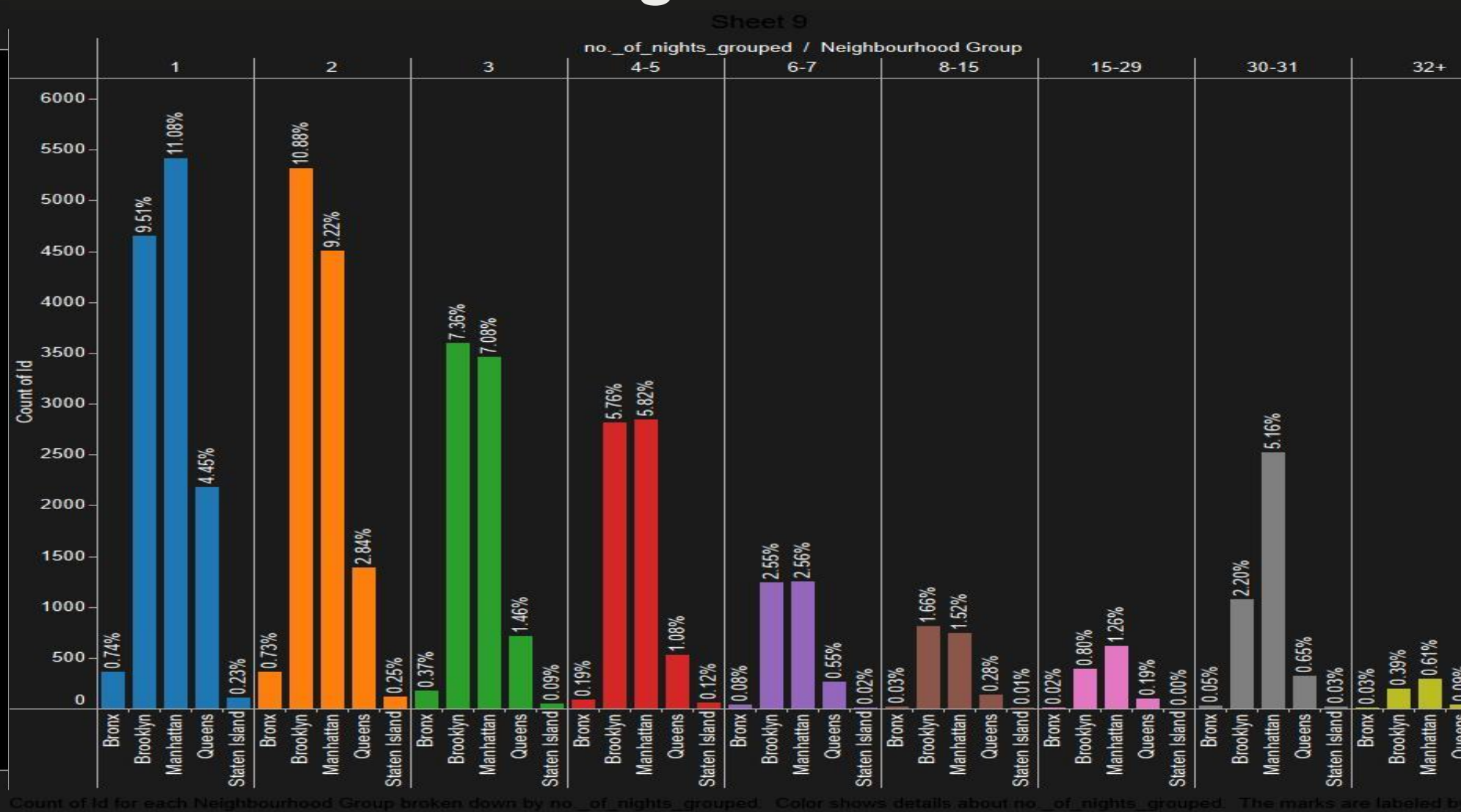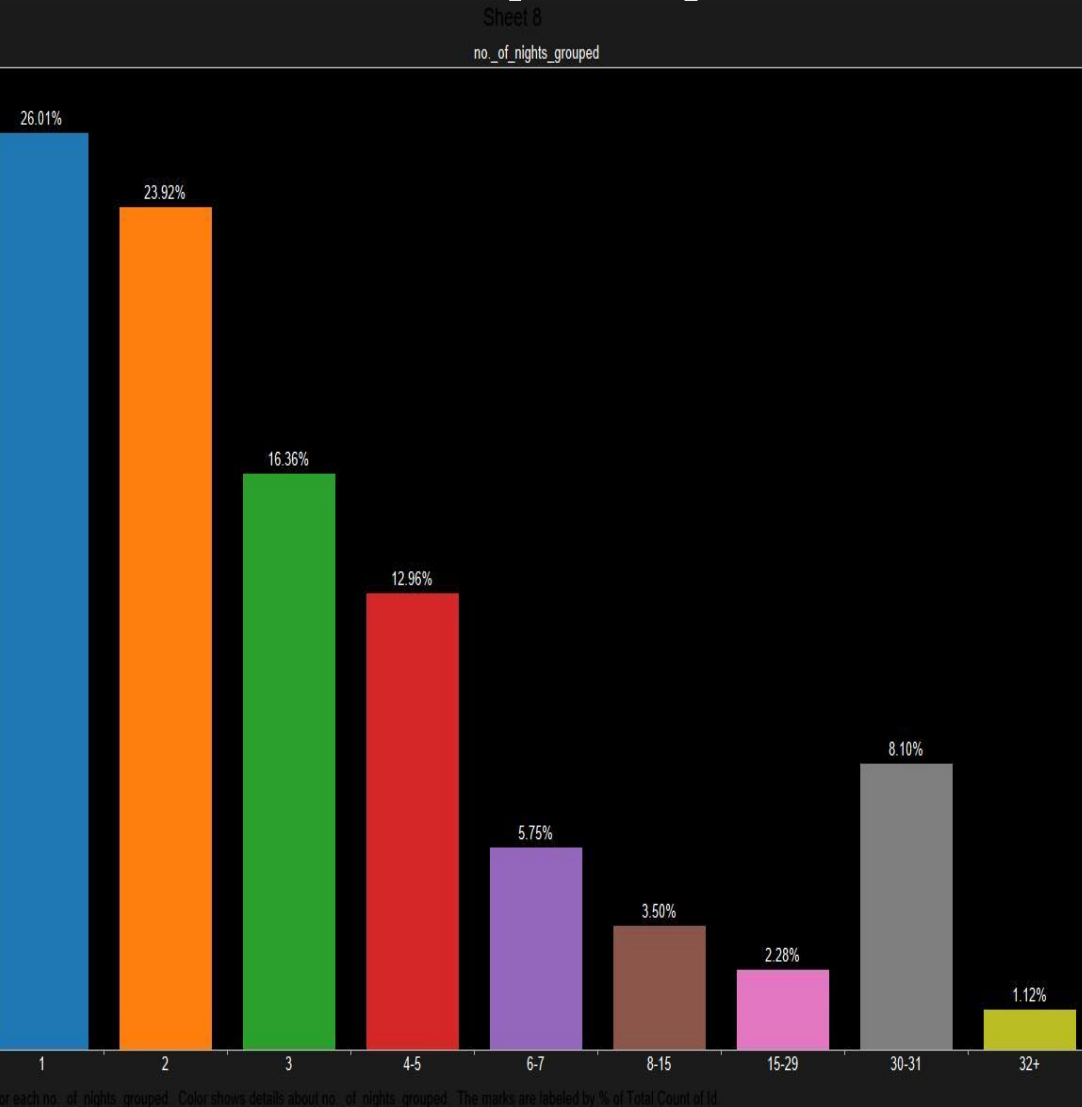
Private Rooms

New acquisitions can be explored to acquire 'private rooms' in Manhattan and Brooklyn.

Entire Homes

New acquisitions can be explored to acquire 'entire homes' in Bronx and Queens.

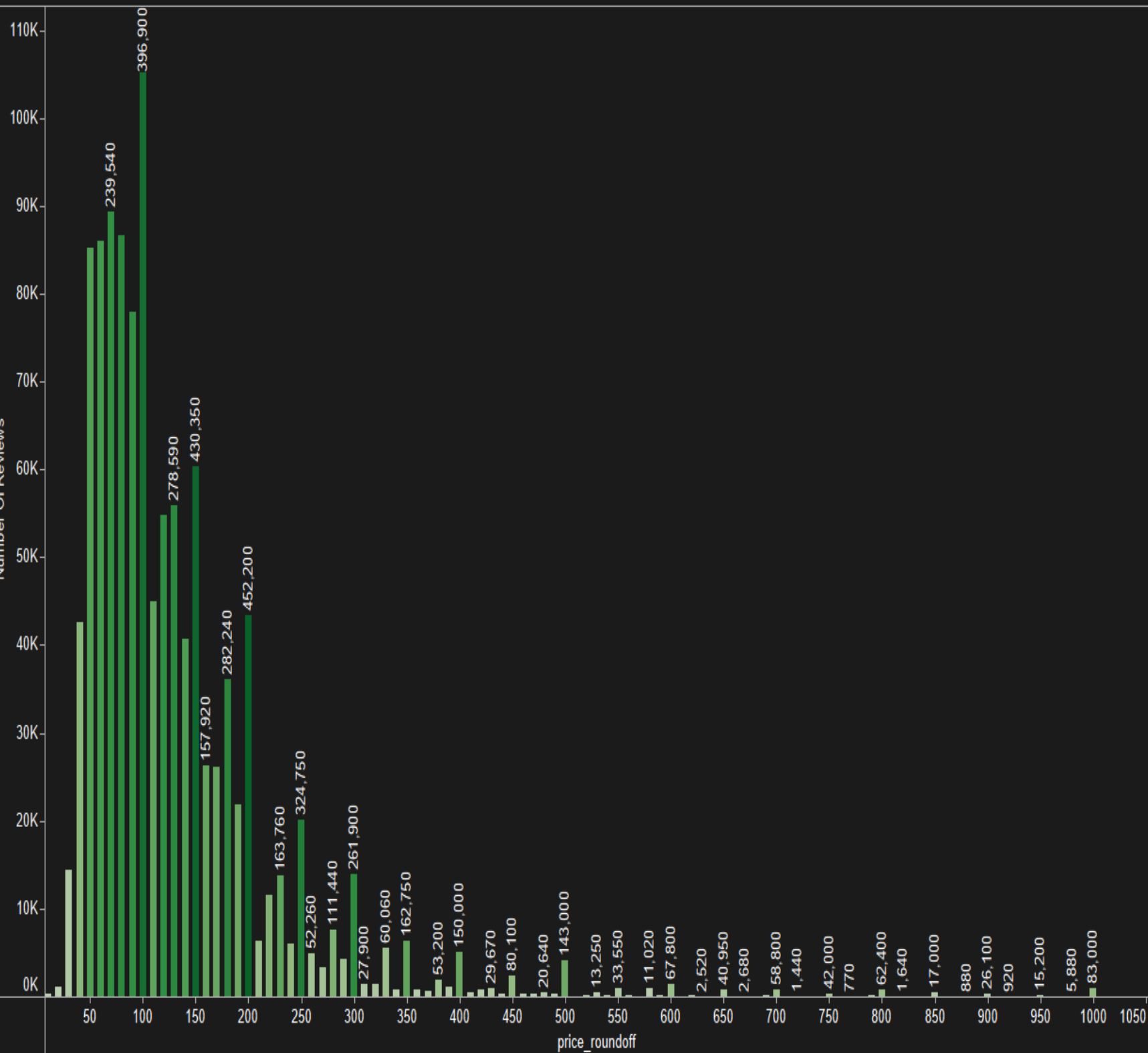# Property demand based on minimum nights offered

The listings with Minimum nights 1-6 have the most number of bookings. We can see a prominent spike in 30 days. This would be because customers would prefer renting out on a monthly basis. After 30 days, we can also see small spikes at 60 & 90 days, this can also be explained by the monthly rent taking trend.

Recommendation:

More number of hosts & listings with monthly rental duration (30-60-90) can be acquired. We see a good potential in the 30-day rental window. Manhattan & Brooklyn have higher number of 30 day bookings compared to the others, these areas can be further targeted.

Also, weekly or bi-weekly rentals can also be acquired as these can be used customers stranded in NYC for quarantine purposes.
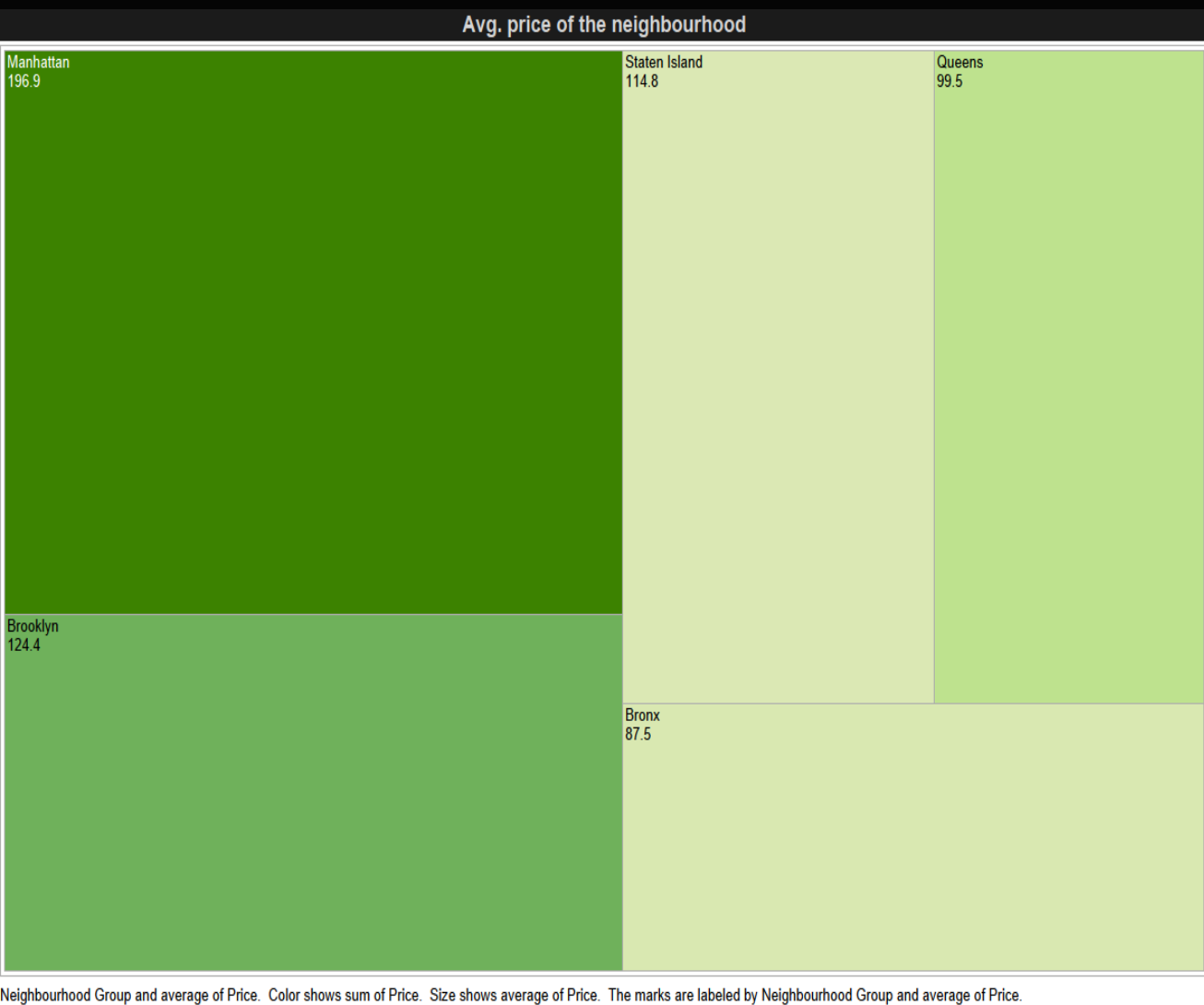
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Price range preferred by customers

We have taken pricing preference based on two parameters – volume of bookings done in a price range and number of reviews in a price range.

The favourable price range is $30- $200. This is the price range most preferred by most customers.

Recommendation:

- New acquisitions and expansion can be done in the price range of $30- $200 as it satisfies both parameters of volume of customer traffic and customer satisfaction.

# Understanding Price Variation with room type and neighborhood

Neighbourhood Group and average of Price. Color shows sum of Price. Size shows average of Price. The marks are labeled by Neighbourhood Group and average of Price.

Manhattan Prices

Manhattan appears to have the highest average price of $196.9. The 'Entire home/apt' room type in Manhattan is the most expensive at $250, much higher than the overall average.

Brooklyn Prices

'Shared Room' type is the cheapest in Brooklyn. Brooklyn has an average price of $124. As there are already many listings available in Manhattan, Brooklyn can be considered for expansion.
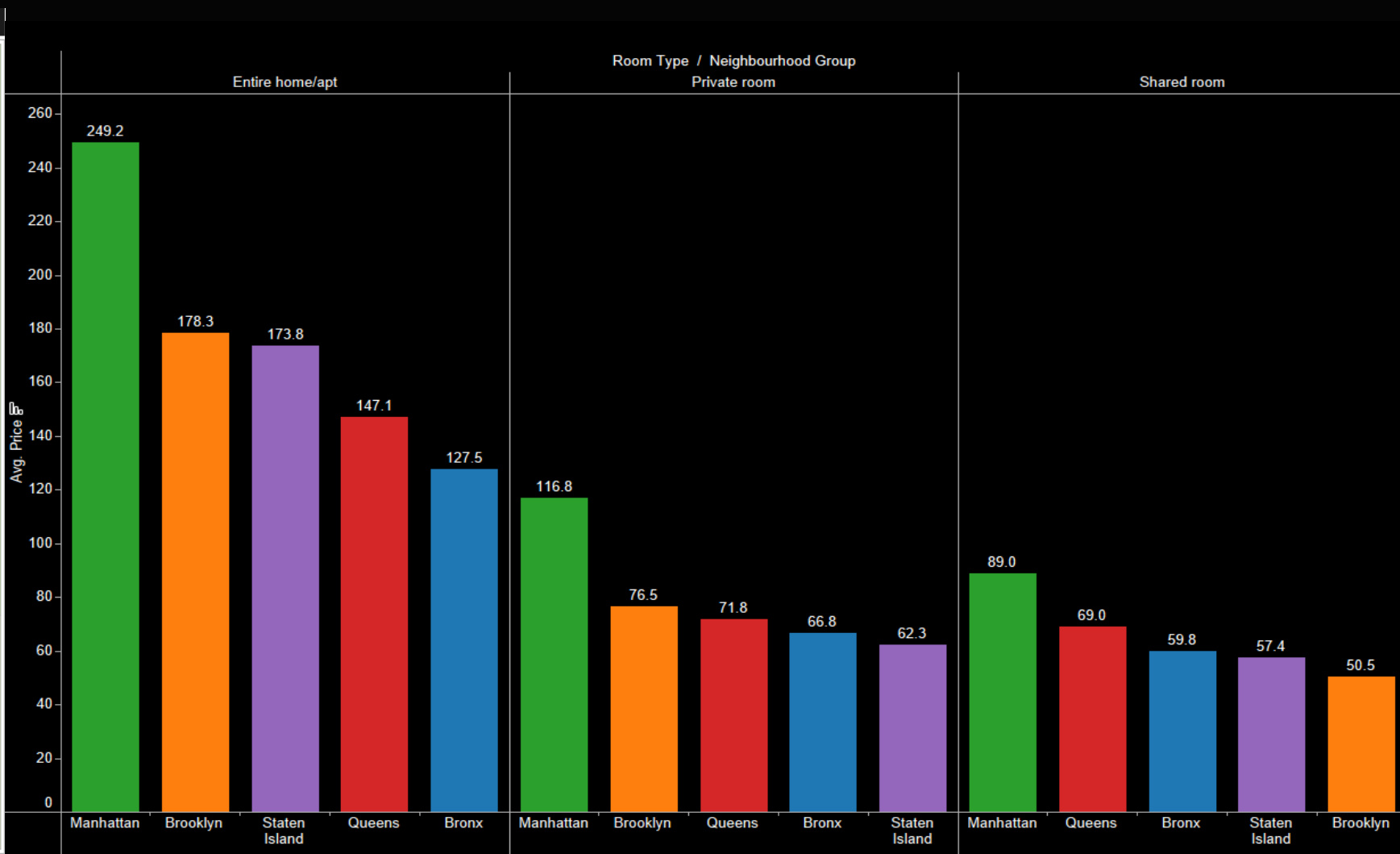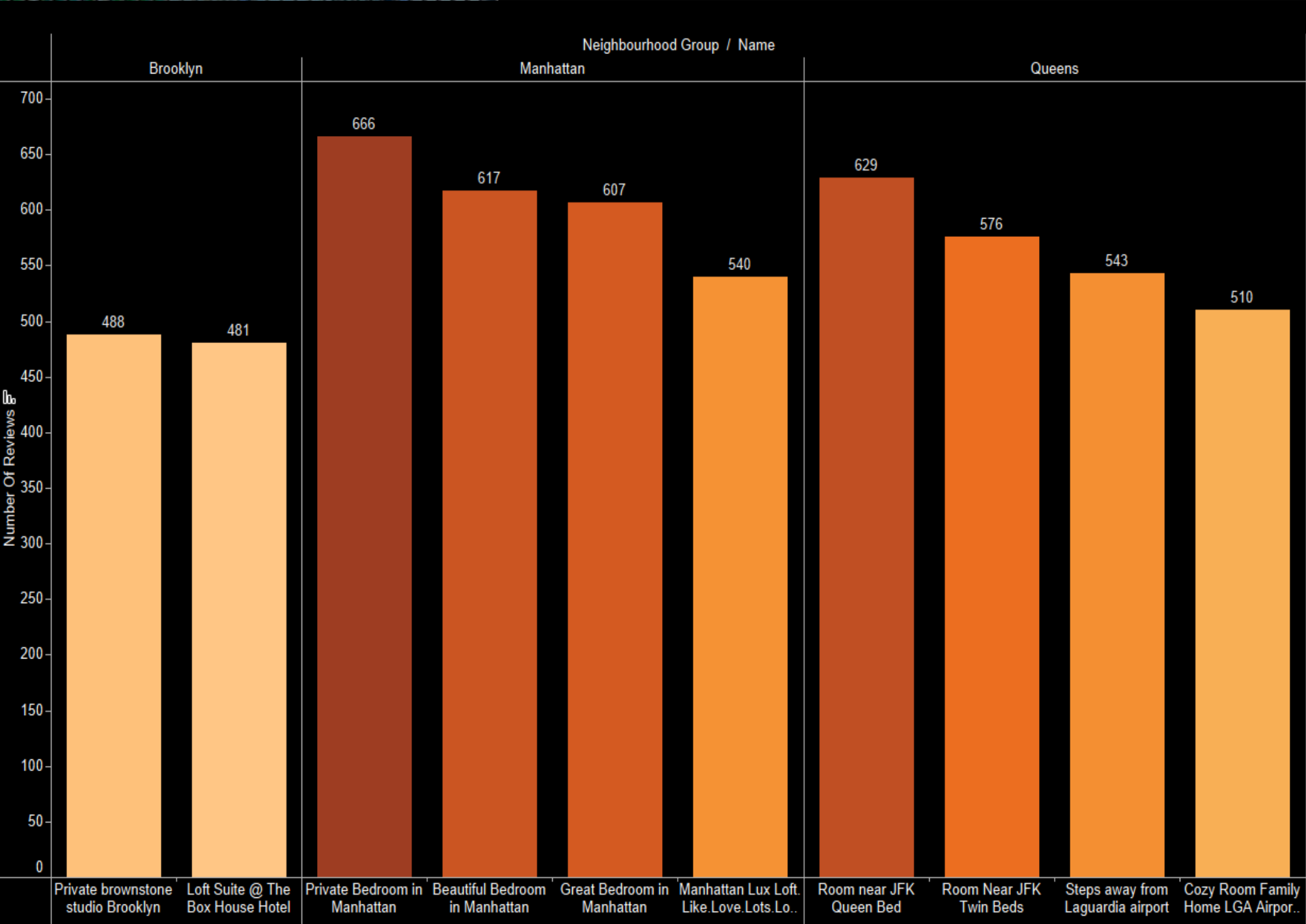
Recommendation

'private rooms' of Manhattan & Brooklyn and 'entire homes' in Bronx and Queens Fall in the favorable price range ($40-$190).

Recommendations

1 Shared Room Promotion

Promotion of shared rooms with targeted discounts to increase bookings.

2 Monthly Rentals

More number of hosts & listings with monthly rental duration (30-60-90) can be acquired. We see a good potential in the 30-day rental window. Manhattan & Brooklyn have higher number of 30-day bookings compared to the others; these areas can be further targeted.

3 Short-Term Rentals

Weekly or bi-weekly rentals can also be acquired, as these can be used customers stranded in NYC for quarantine purposes.

4 Expansion Strategy

New acquisitions and expansion can be done in the price range of $40 - $190 as it satisfies both parameters of volume of customer traffic and customer satisfaction. New acquisitions can be explored to acquire 'private rooms' in Manhattan and Brooklyn and 'entire homes' in Bronx and Queens. Brooklyn can be considered for expansion as it has an average price of $124.

5 Coastal Regions

Increasing acquisitions and new properties in coastal regions can increase customer bookings.

Appendix: About the Data

Column	Description
Id	Listing ID
Name	Name of Listing
Host_id	host ID
Host_name	Name of Host
Neighbourhood	Neighbourhood_group - Location
Neighborhood	Neighborhood - Area
Latitude & Longitude	Map co-ordinates
Room_type	Listing space type
Price	Price of listing
Minimum_nights	Amount of nights minimum
Number_of_reviews	number of reviews
Last_review	Lastest review
Reviews_per_month	number of reviews per month
Calculated_host_listings_count	no. of listings per host
Availability_365	no. of days when listing is available for booking

Dataset

Provided with Airbnb New York City Listings
Dataset till 2019 (48895 Rows * 16 Columns)

Key Columns

Listing ID, Name, Host ID, Host Name, Neighbourhood, Neighborhood, Latitude & Longitude, Room Type, Price, Minimum Nights, Number of Reviews, Last Review, Reviews per Month, Calculated Host Listings Count, Availability 365

Appendix: Methodology

Analysis Approach

The analysis and visualizations were done using Tableau considering various parameters. The analysis was done keeping in mind the business side of the project. The important factors taken into consideration were customer booking volume and customer preference.

Key Factors

The first half of the presentation focused on customer preference. The second half compared various parameters of customer preference with respect to price.

Recommendations

Recommendations have been made keeping in mind the above parameters, including customer experience, price variation, volume of customer booking, room type, neighborhood, number of reviews, and geography.