AIRBNB NYC Case Study

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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.
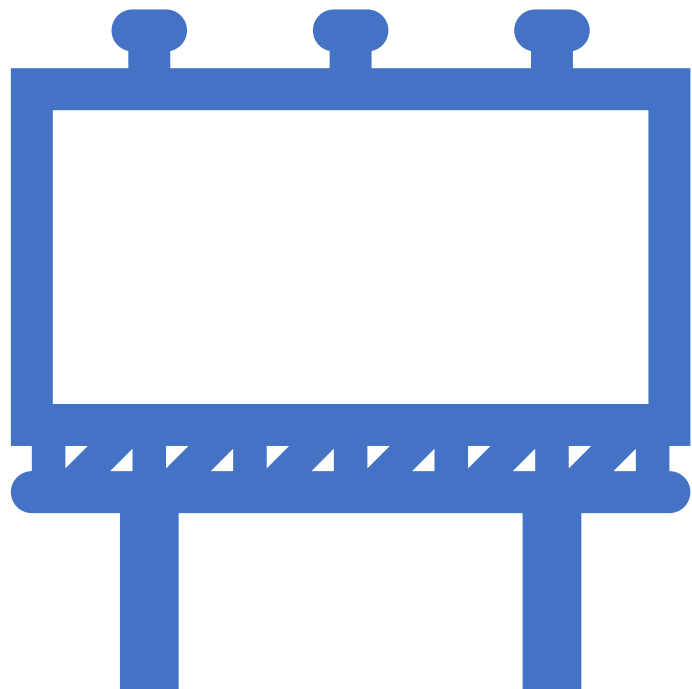
Objective

The presentation will focus mainly on the following points:

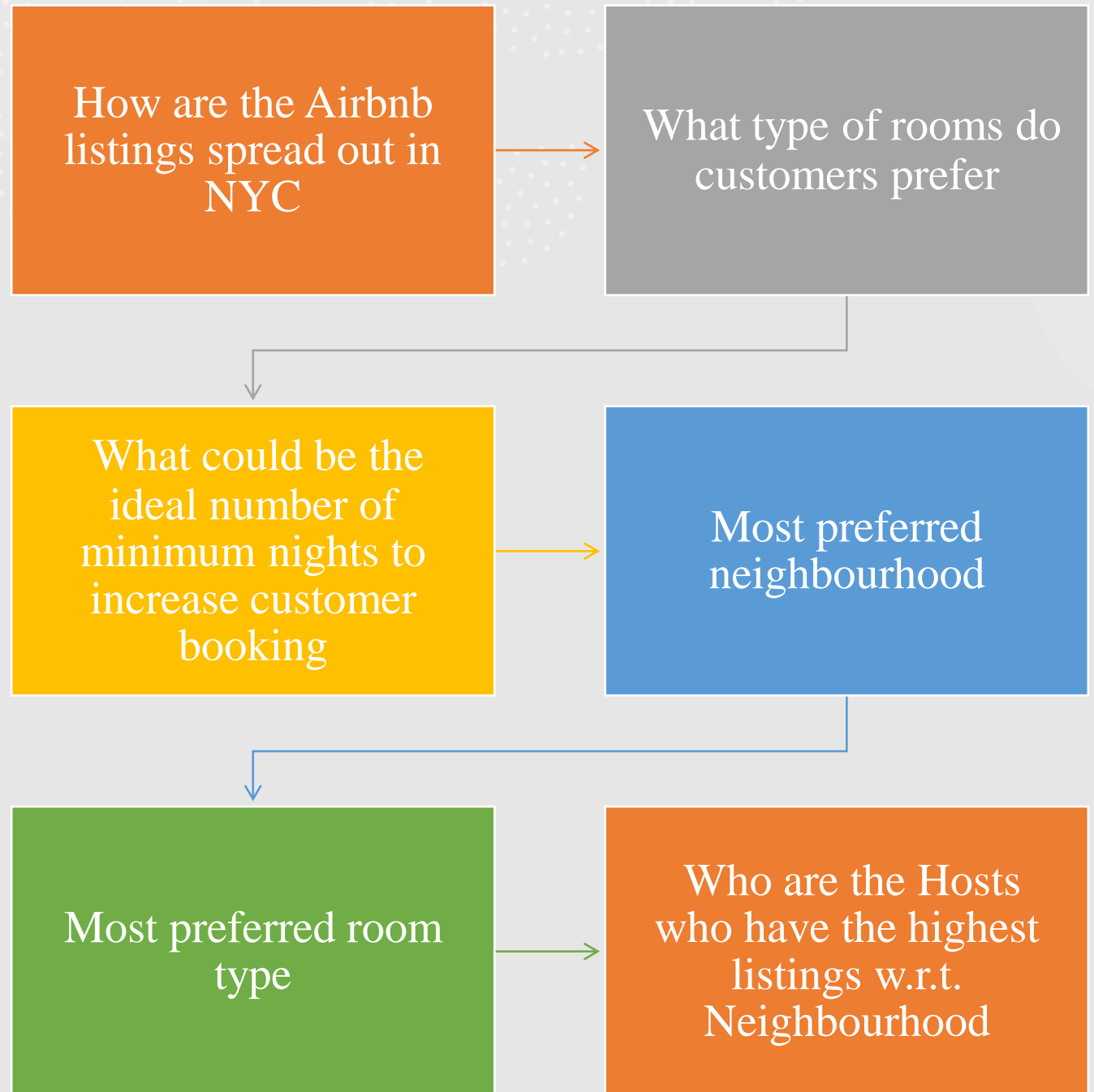Get a better understanding about Airbnb listings with respect to various parameters

Understand the customer preferences

Understand the customer booking trend

Key Insights:
To understand some important insights we have explored the following questions:

How are the Airbnb listings spread out in NYC

What type of rooms do customers prefer

What could be the ideal number of minimum nights to increase customer booking

Most preferred neighbourhood

Most preferred room type

Who are the Hosts who have the highest listings w.r.t. Neighbourhood

AirBnb Listing distribution in NYC

Airbnb has good presence in Manhattan, Brooklyn & Queens

Listings are maximum in Manhattan (44%) & Brooklyn (41%) owing to the high population density and it being the financial and tourism hub of NYC. Staten Island (~1%) has the least number of listings, due to its low population density and very few tourism destinations.
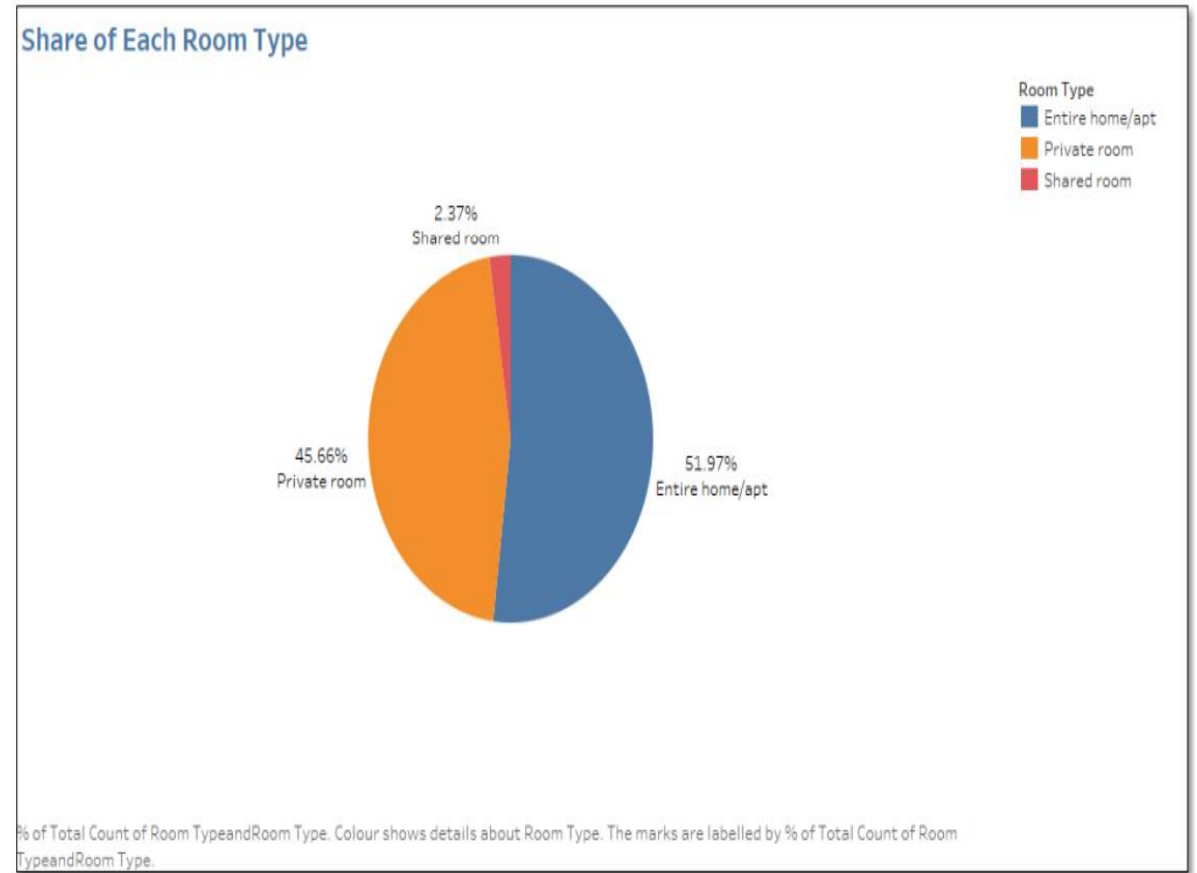

ing distribution in NYC

Neighbourhood Group

44.30%

41.12%

11.59%

2.23%

0.76%

Manhattan   Brooklyn   Queens   Bronx   Staten Island
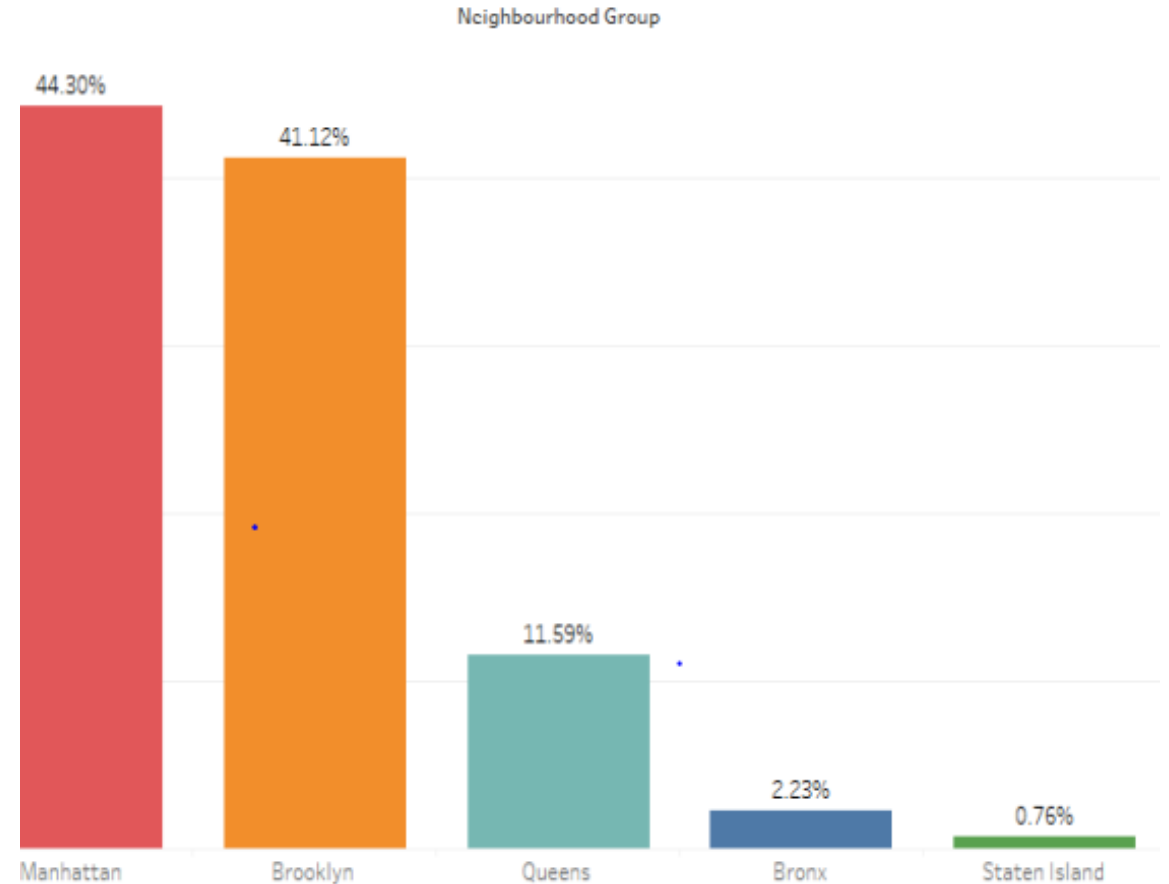
ld for each Neighbourhood Group. Colour shows details about Neighbourhood Group. The marks are labelled by % of Total

Share of Each Room Type

- Three types of rooms - Entire home/Apartment, Private room & shared room.

- Overall, customers appear to prefer private rooms (45%) or entire homes (52%) in comparison to shared rooms (2.4%).

- Airbnb can promote shared room by providing discounts to increase bookings

Room type distribution in Neighborhood Group

- Queens & Bronx contribute 60% each to private rooms, more than the combined ratio of 45%. Whereas, Manhattan has a higher contribution in entire home (61%), compared to the combined ratio of 52%.
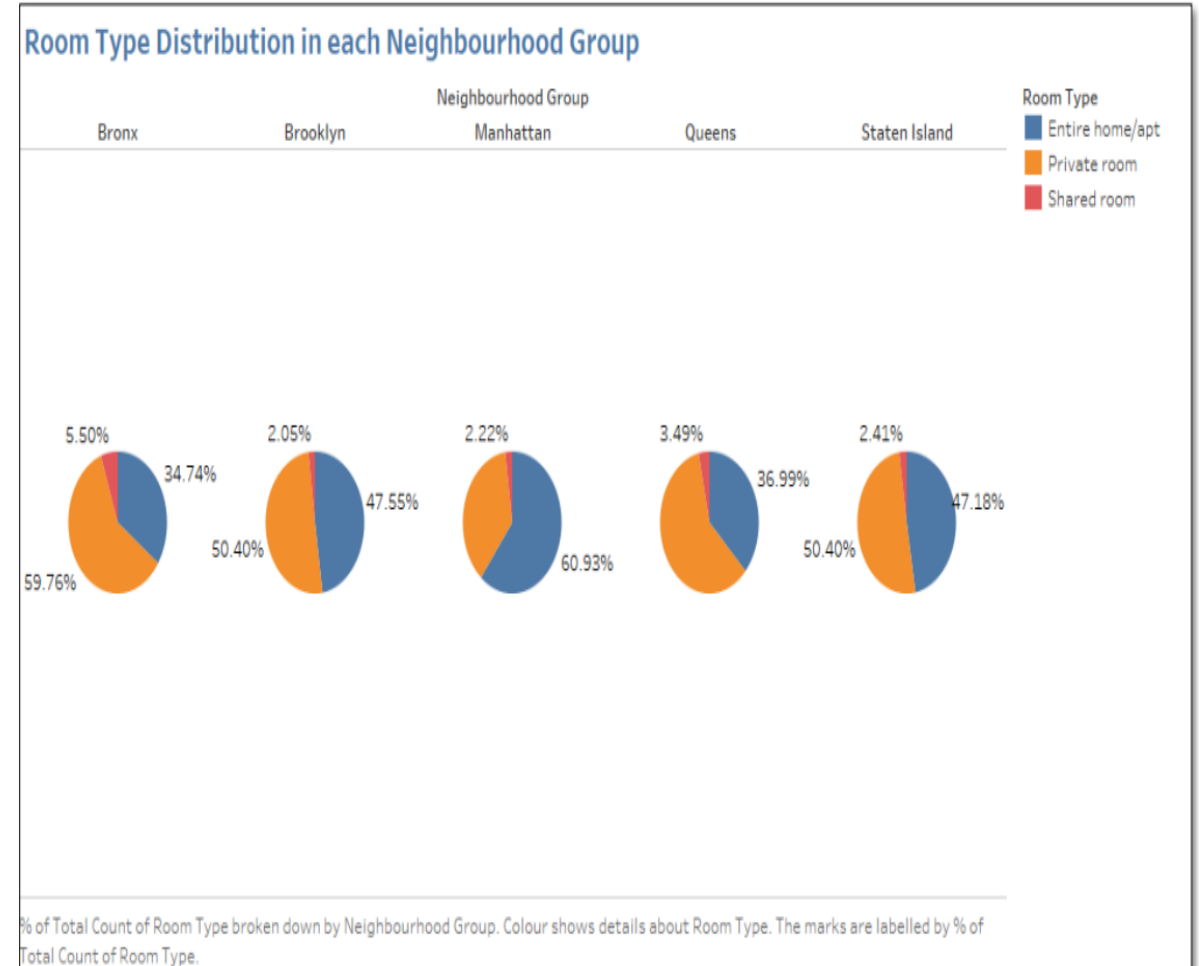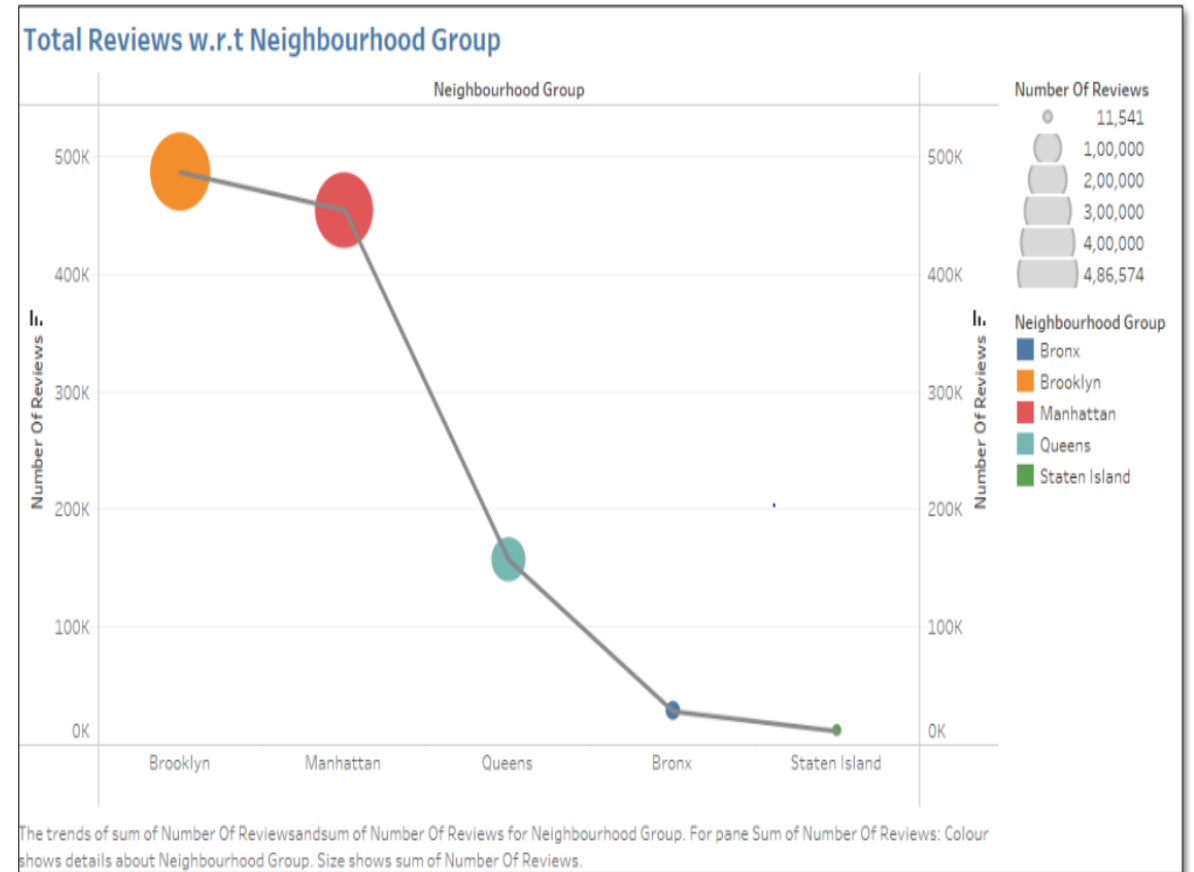
Customer Booking w.r.t Minimum Nights

- The listings with Minimum nights 1-6 have the most number of bookings. The listings with Minimum nights 1-6 have the most number of bookings.
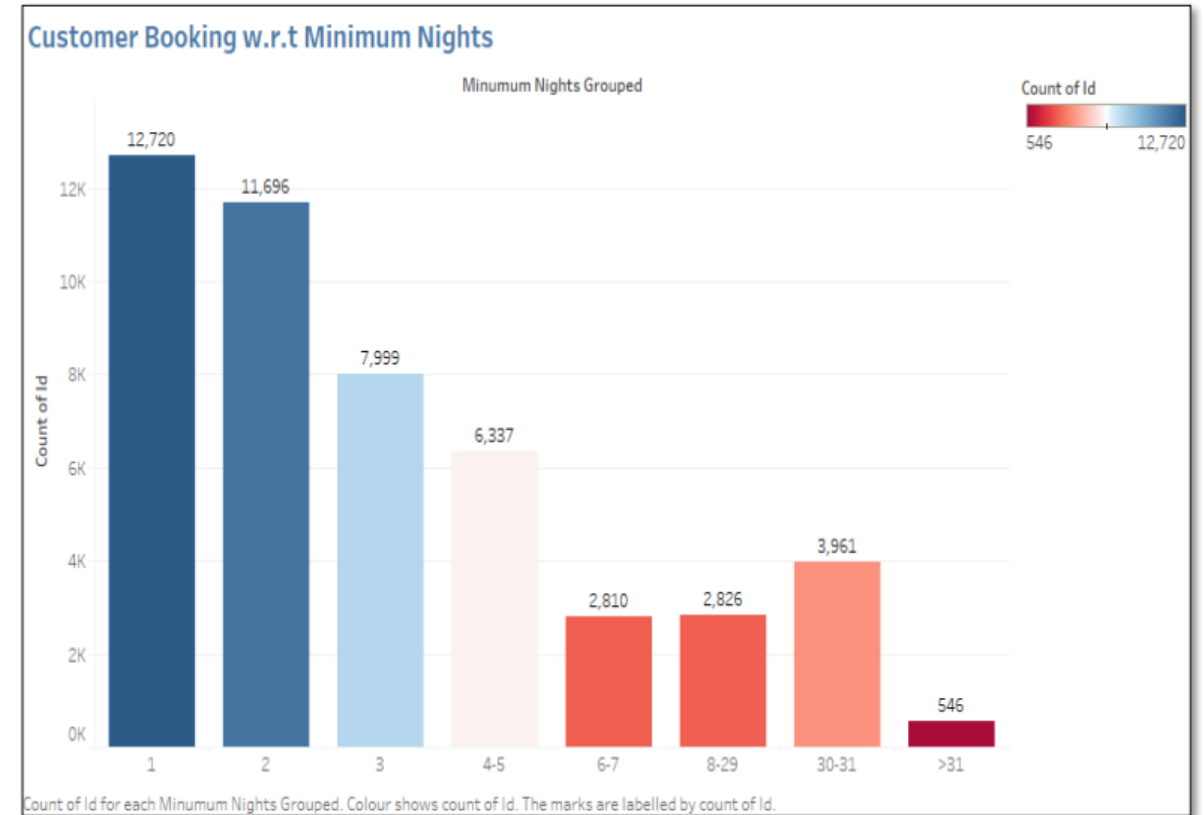
To Reviews W.r.t Neighborhood Group

- In line with our earlier observation, we see the maximum reviews in listings for Manhattan & Brooklyn, implying that more bookings happen in these neighbourhoods. The higher number of customer reviews also imply higher satisfaction in these localities.

Total Reviews w.r.t Neighbourhood Group

The trends of sum of Number Of Reviewsandsum of Number Of Reviews for Neighbourhood Group. For pane Sum of Number Of Reviews: Colour shows details about Neighbourhood Group. Size shows sum of Number Of Reviews.

Total reviews w.r.t Room type

- Also, we see the maximum reviews in room types 'Entire home/apt' & 'Private rooms'. We can safely infer that, customers do not prefer 'Shared rooms'.
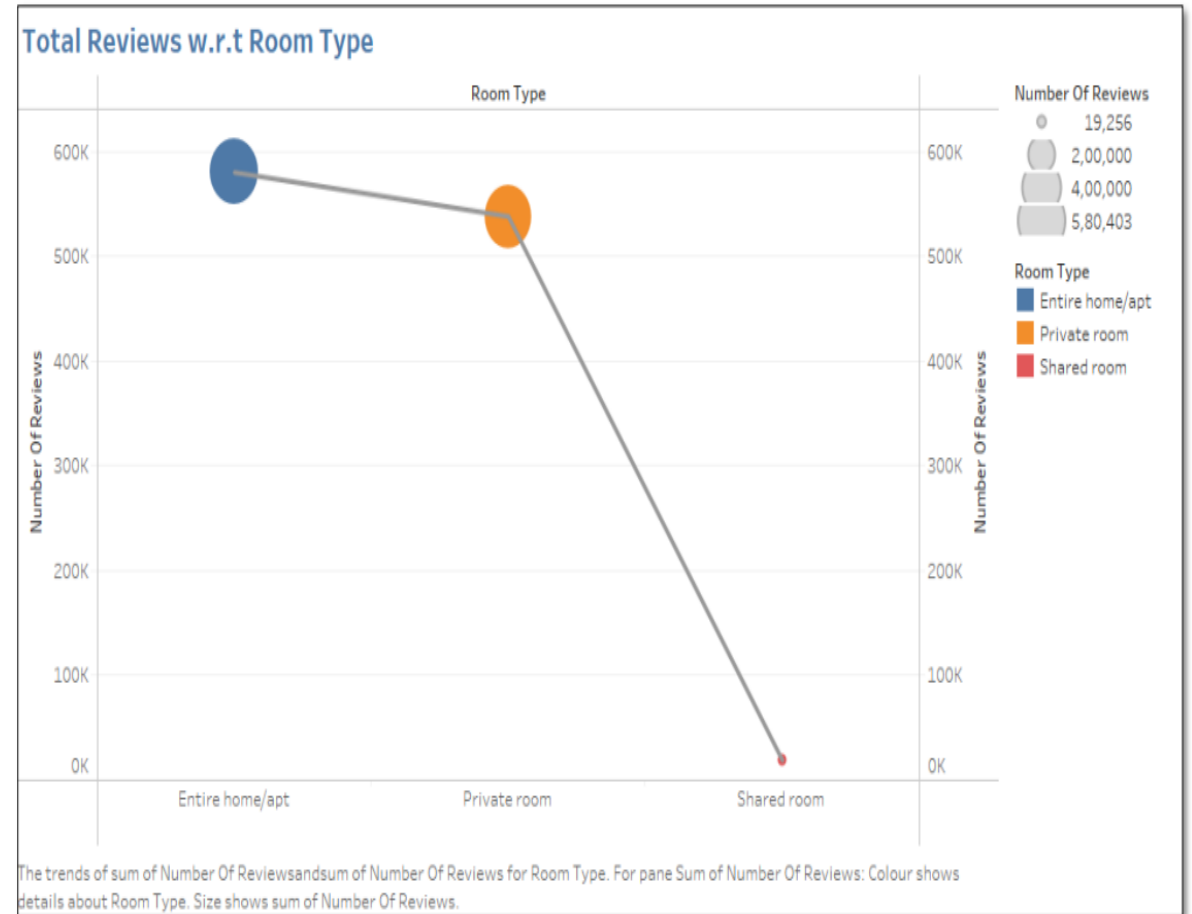
- More experienced hosts know the market better.

- ☐ We observe a single host having multiple listings mainly in the Manhattan area. This is because Manhattan has the highest influx of tourists and financial enthusiasts visiting the city all year round. ☐ This makes it more profitable for the host to acquire properties in the same area.


Hosts having Highest Listing wrt Neighbourhood
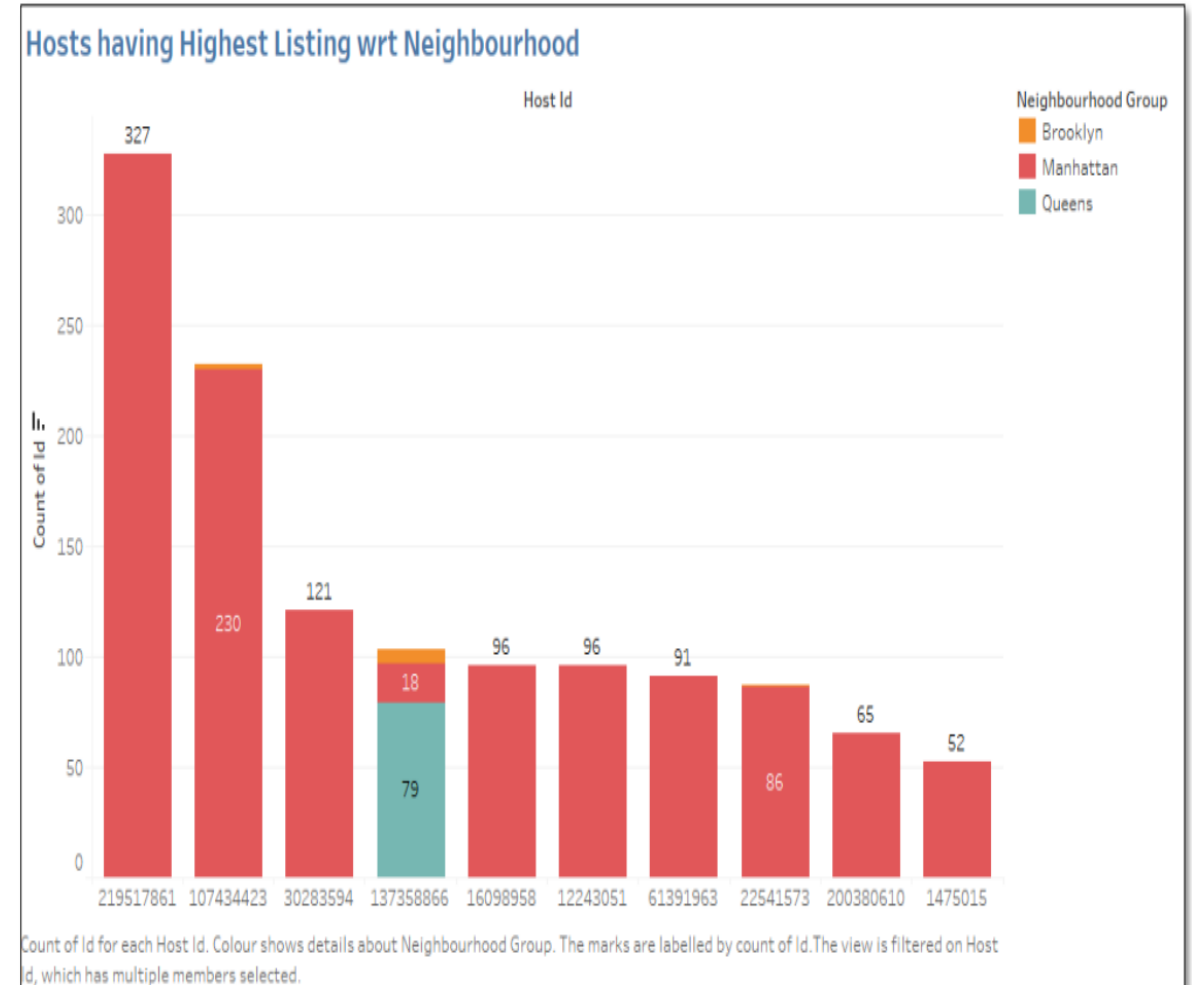
Appendix

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

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

Appendix

Methodology

☐ The data was analysed through univariate and bivariate analysis.

☐ The analysis and visualizations were done using Tableau considering various parameters.

☐ The main parameters that have been taken into account for analysis are –

☐ Geography based bookings

☐ Bookings based on room type

☐ Number of reviews

☐ Minimum number of nights

☐ Inferences have been made keeping in mind the above parameters Assumptions

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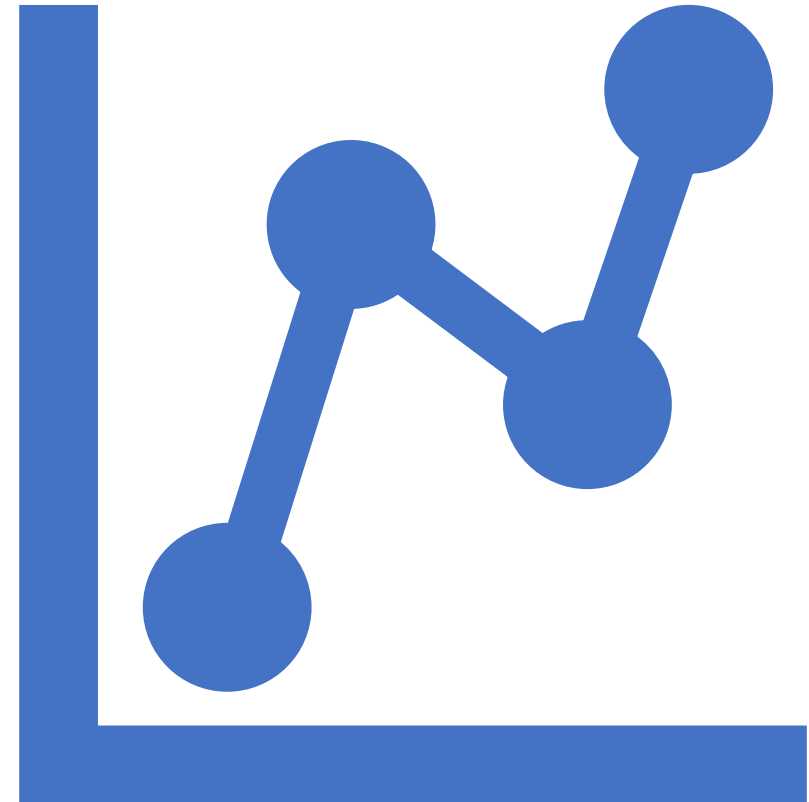
Assumptions

- As we are not aware about the nature of reviews, we have assumed that the properties, which received higher number of reviews, have a better customer liking.
- There are null values in name, host_name, last_review and reviews_per_month columns which kept as it is assuming it will not affect the analysis

Thank you