

airbnb, New York

Case Study

- Aamir Farhan Sheikh



Contents

1. Introduction
2. Problem Statement
3. Objectives
4. Key Insights
5. Appendix
 - About the data
 - Methodology
 - Assumption



Introduction

Airbnb is a global online marketplace that connects travelers with hosts offering unique accommodations, ranging from cozy apartments and luxury villas to treehouses and boutique stays. Founded in 2008, Airbnb revolutionized the travel industry by enabling individuals to rent out their properties or spare rooms to guests, providing an alternative to traditional hotels.

The platform operates in over 220 countries, offering flexible booking options, personalized experiences, and cost-effective stays. With a user-friendly interface, secure payment system, and a robust review system, Airbnb ensures trust and transparency between hosts and guests.

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.

Airbnb wants to focus on the listings in various cities in the state of New York. So we have analysed the data of various Airbnb listings in New York.





Objective

To prepare for the next best steps that Airbnb needs to take as a business,
The presentation will focus 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
- Understand the price variation

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 bookings

Based on customer review:

- Most preferred neighbourhood
- Most preferred room type
- Who are the Hosts who have the highest listings w.r.t. Neighbourhood

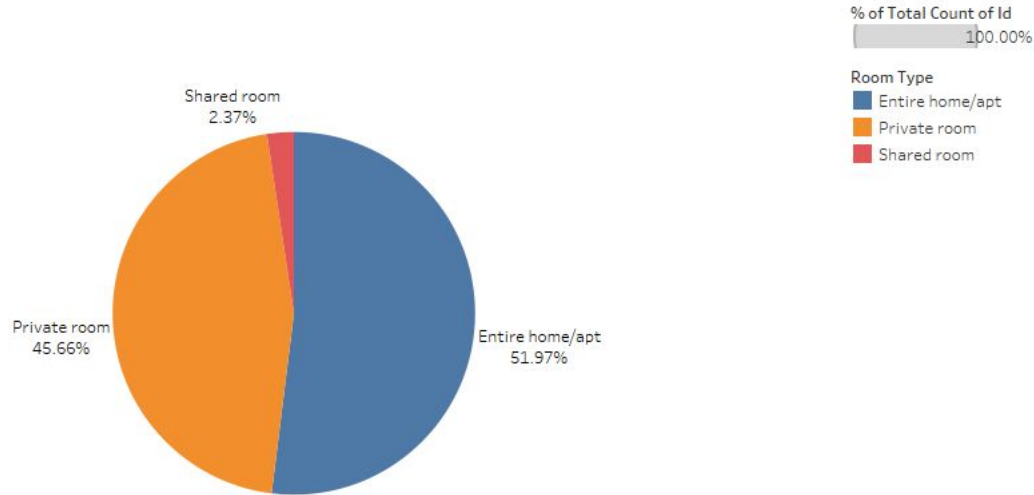
Spread of Listings in NYC



Map based on average of Longitude and average of Latitude. Color shows details about Neighbourhood Group. Details are shown for Id.

- Airbnb has good presence in Manhattan, & Brooklyn followed by Queens.
- Highest number of listings are 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.

Share of Room types



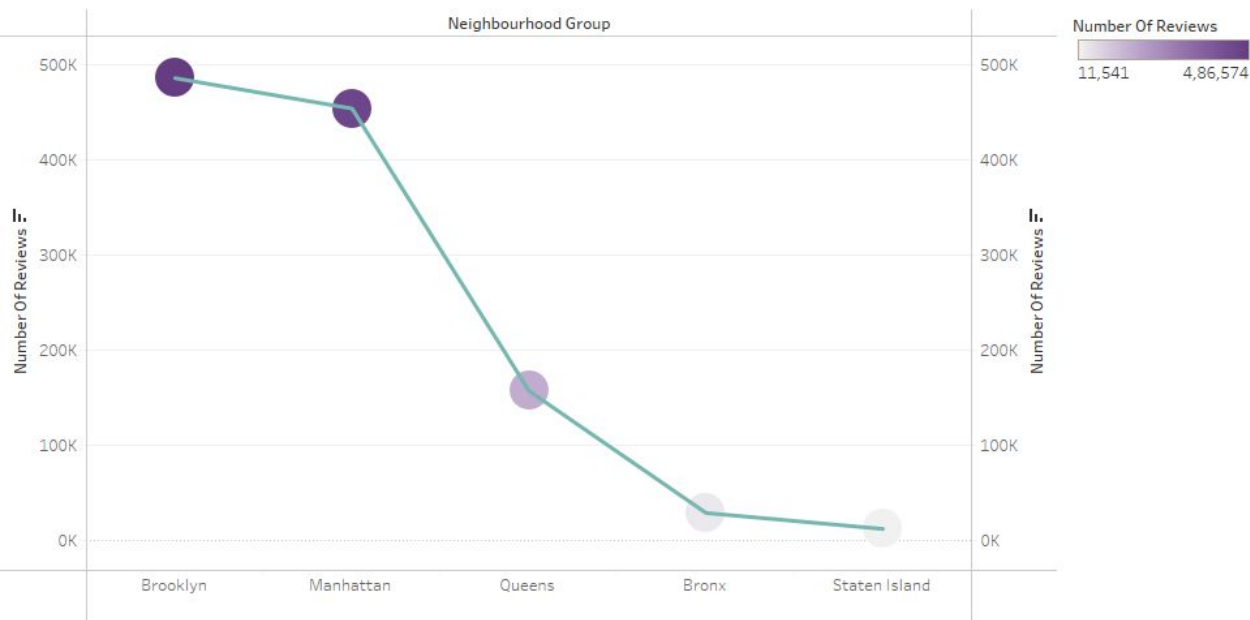
Room Type and % of Total Count of Id. Color shows details about Room Type. Size shows % of Total Count of Id. The marks are labeled by Room Type and % of Total Count of Id.

- Three different types of rooms - Entire home/Apartment, Private room & shared room are available in the areas
- Major chunk of listings are of Entire home/Apartment
- We can safely infer that customers do not prefer shared rooms
- Airbnb can promote shared room by providing discounts or eradicate the type entirely to save cost

- Booking Preference by the customer is the highest for 2-3 nights
- Bookings for 1 night also has high customer preference as most of the customer on business trips prefer to book the rooms for just 1 night
- Bookings drop drastically for more than 30 days as very few customer prefer to book rooms for more than a month
- These are the few customers who take Entire home/Apartment on rent



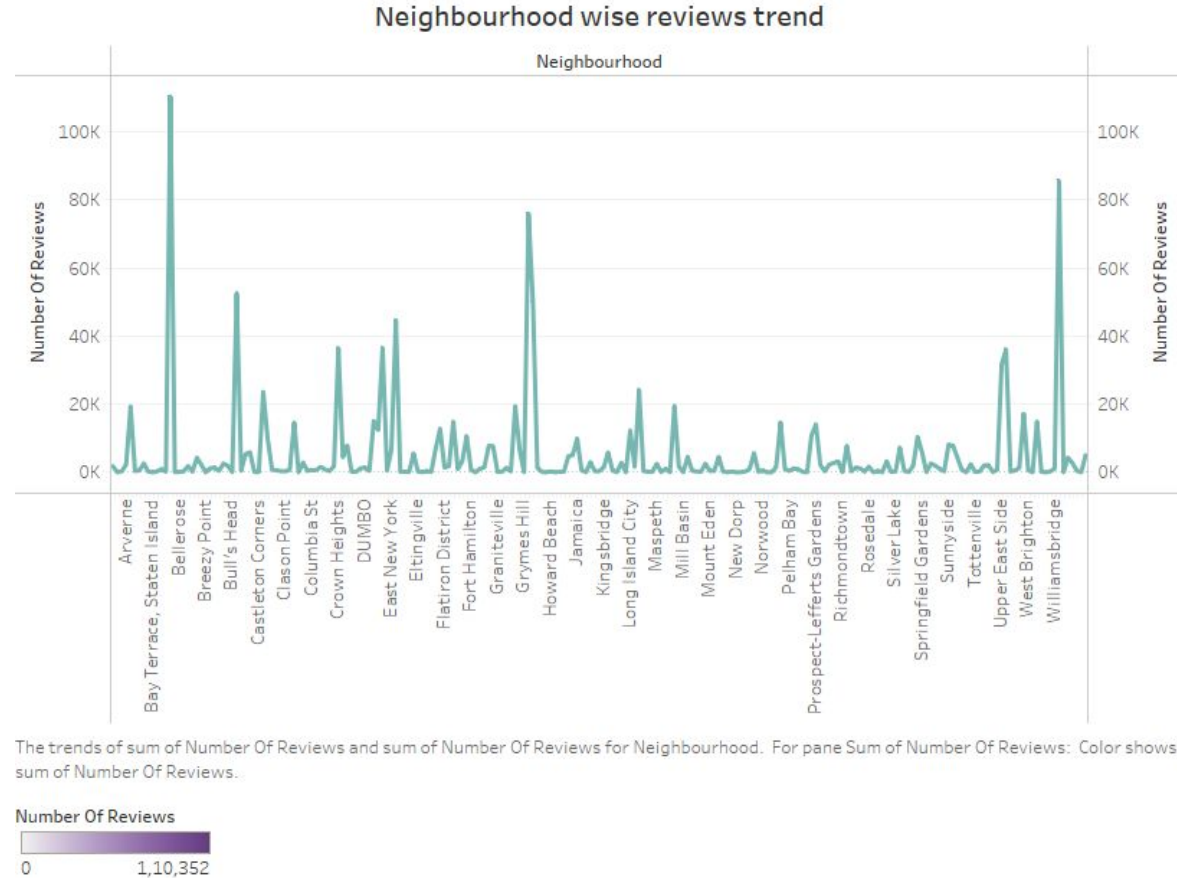
Location wise reviews trend



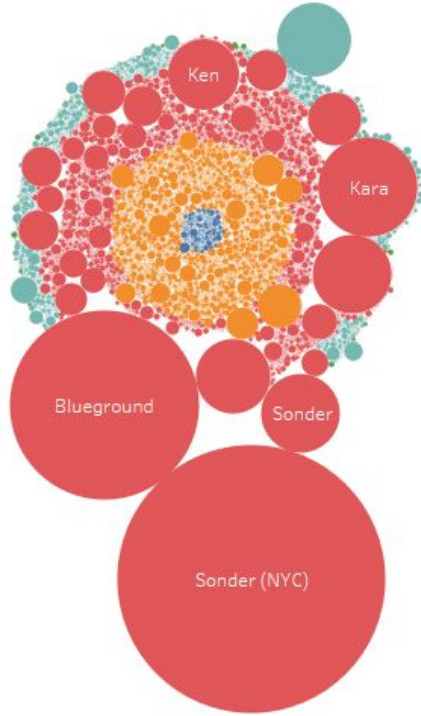
The trends of sum of Number Of Reviews and sum of Number Of Reviews for Neighbourhood Group. For pane Sum of Number Of Reviews: Color shows sum of Number Of Reviews.

- 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.
- Bronx and Staten Island Again has the least reviews which can also be a result of least number of listings

- Neighbourhoods with highest number of reviews are Bedford-stuyvesant, Williamsburg and Harlem
- This trend is followed by Bushwick, East Village, Upper East and West side and Crown Heights
- Airbnb can focus on increasing number of listings in these areas
- Airbnb can also focus on improving customer satisfaction in the listings in other areas



Tops Hosts with the most Listings



Host Name. Color shows details about Neighbourhood Group. Size shows sum of Calculated Host Listings Count. The marks are labeled by Host Name.

Neighbourhood Group

- Bronx
- Brooklyn
- Manhattan
- Queens
- Staten Island

- Hosts having the highest number of listings are majorly in Manhattan areas
- This is because Manhattan has the highest influx of tourists and financial enthusiasts visiting the city all year round
- Sonder(NYC), Blueground and Kara qualifies as the top hosts having the most number of listings respectively
- Airbnb can approach these hosts to acquire listings in other areas like Queens as they are more experienced in the market

Effect of Reviews on Avg Price in different locations



Avg. Price and Reviews Per Month for each Neighbourhood Group. Color shows details about Avg. Price. The view is filtered on Reviews Per Month, which keeps non-Null values only.

Measure Names

- Avg. Price
- No Measure Value

- Reviews seem to have a direct impact on the prices of the listings
- The chart shows how the avg price varies for the listings in various locations
- Manhattan has the highest priced listings in the city
- Airbnb can target customer satisfaction in other areas to get better reviews which can then result in better prices

Appendix

About the data

The analysis has been done on a dataset provided by Airbnb which contains details of New York city listings in certain neighbourhoods for the years through 2011 to 2019. However, The data mostly represents the records from the year 2019.

The data has some null values which did not affect the analysis and hence had not been treated.



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

As we are not aware about the nature of reviews, we have assumed them as positive and that the properties which received higher number of reviews have a better customer liking and preference.

Minimum nights could be interpreted as

- Minimum nights a listing offers the booking to be
- Minimum nights the customers prefer to book

We are considering the second situation in order to understand customer preference.