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Storytelling Case Study: Airbnb, NYC

Background

- ▶ An American firm called Airbnb, Inc. runs an online marketplace for travel-related services and accommodations, especially homestays for holiday rentals.
- ▶ Airbnb gives hosts a platform to offer short-term housing and travel-related events for guests.
- ▶ The most populous and diversified city in the US is New York City.
- ▶ Manhattan, Brooklyn, Queens, the Bronx, and Staten Island are among the five boroughs that make up the city; they were all grouped into one metropolis.
- ▶ It is widely acknowledged as the industry's global hub for financial services.

Problem Statement

- ▶ The revenue of Airbnb has significantly decreased during the last few months. Airbnb suffered a significant income loss at the time of COVID.
- ▶ Airbnb wants to make sure that company is completely ready for this transformation now that the limits have started to loosen, and people have started to travel more.
- ▶ As a result, analysis was performed on a dataset comprised of different Airbnb listings in New York.

Objective

The following points will be highlighted in the presentation:

- Get information about the numerous parameters that affect Airbnb listings
- Recognize the customer's choices
- Recognize the client booking trend

Analysis

To gain some significant insights, we examined the following questions:

- How are Airbnb listings distributed in New York City?
- Which rooms do clients prefer?
- What is the best number of required nights to enhance consumer bookings?

According to client feedback, refer next slides to further analysis with the help of Tableau.

About the Data

Assumption:

We have presumed that the properties with the highest number of reviews have a greater customer liking because we do not know the nature of the reviews.

Column	Description
id	listing ID
name	name of the listing
host_id	host ID
host_name	name of the host
neighbourhood_group	location
neighbourhood	area
latitude	latitude coordinates
longitude	longitude coordinates
room_type	listing space type
price	
minimum_nights	amount of nights minimum
number_of_reviews	number of reviews
last_review	latest review
reviews_per_month	number of reviews per month
calculated_host_listings_count	amount of listing per host
availability_365	number of days when listing is available for booking

Categorical Variables:

- room_type
- neighbourhood_group
- neighbourhood

Continuous Variables(Numerical):

- Price
- minimum_nights
- number_of_reviews
- reviews_per_month
- calculated_host_listings_count
- availability_365
- Continuous Variables could be binned in to groups too

Location Variables:

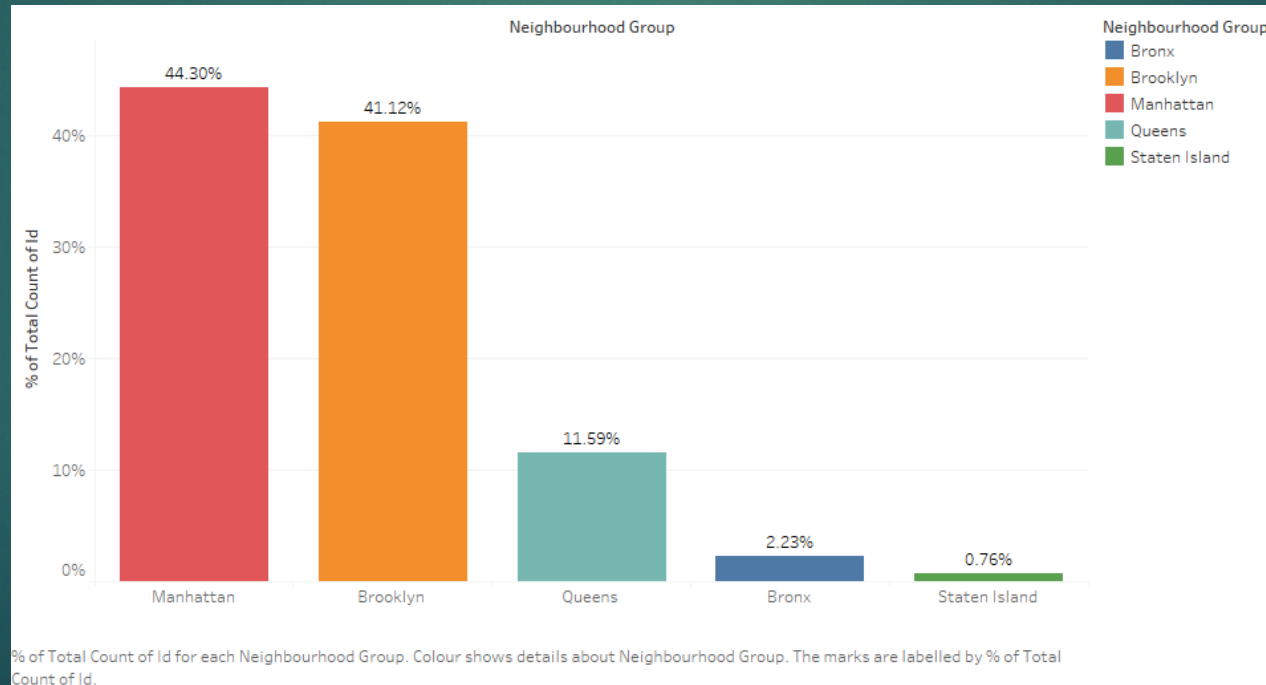
- latitude
- longitude

Time Variable:

- last_review

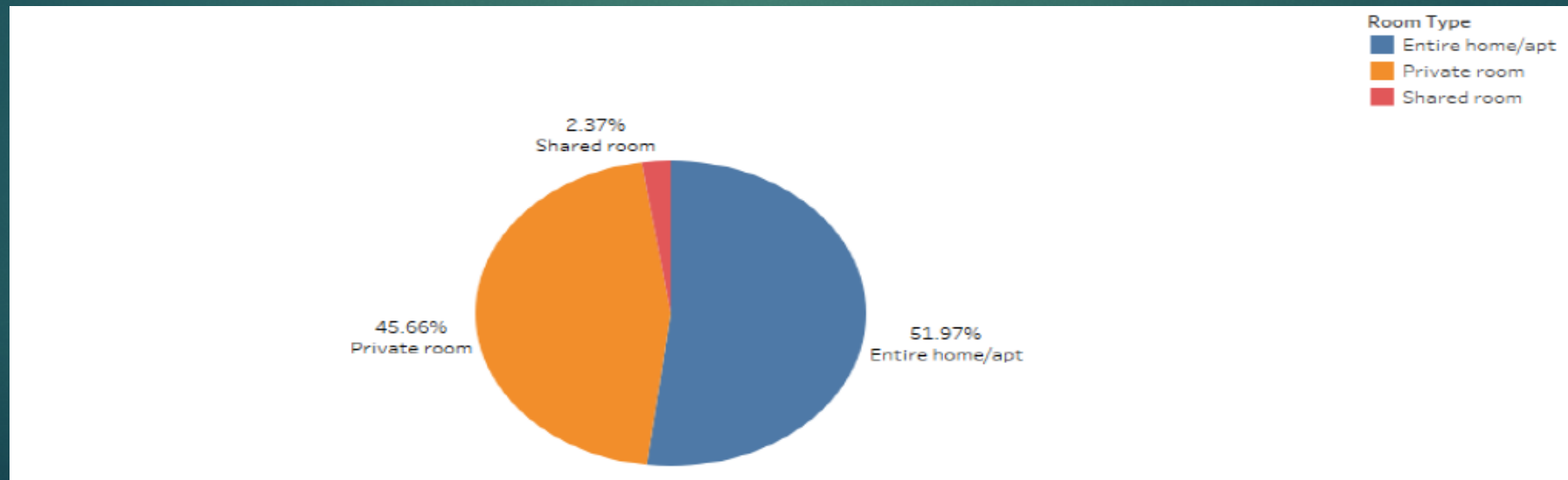
AirBnb listing distribution in NYC

- ▶ Airbnb is well-known in Manhattan, Brooklyn, and Queens.
- ▶ Because of the large population density and the fact that it is the financial and tourism hub of NYC, Manhattan (44%) and Brooklyn (41%) have the most listings. Staten Island (1%), with its low population density and few tourist destinations, has the fewest listings.



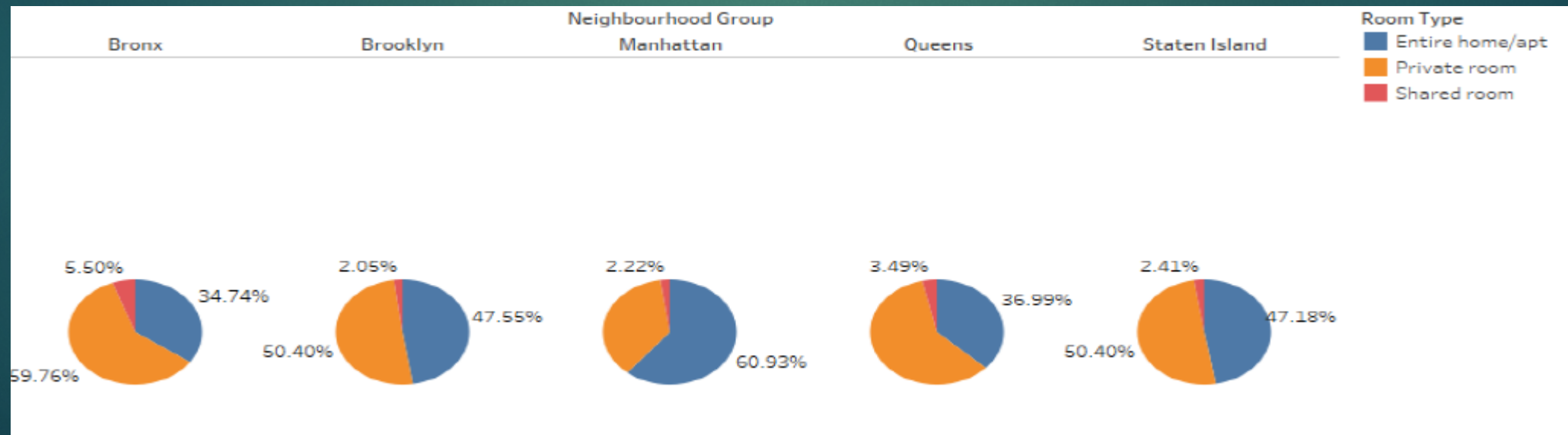
Room Type Analysis

- ▶ There are three types of rooms –
 1. Entire home/apt
 2. Private room
 3. Shared room
- ▶ Overall, clients appear to prefer private rooms (46%) or entire home/apt (52%) over shared rooms (2%).
- ▶ Airbnb might promote shared rooms by offering discounts in order to encourage bookings.



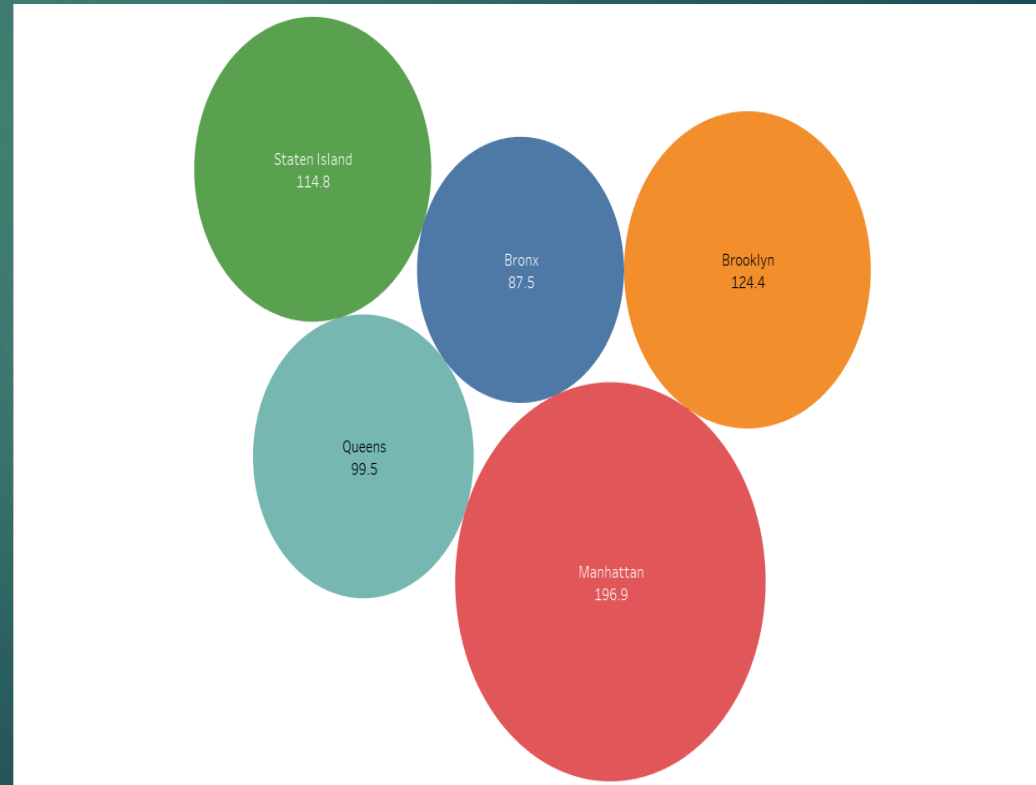
Room Type Analysis w.r.t neighbourhood group

- ▶ Most individuals prefer to reserve the entire home or a private room in Manhattan and Brooklyn, two of the most popular neighbourhood groups.
- ▶ With 60.93% of all listed properties being homes or apartments, Manhattan has the greatest percentage.
- ▶ Bronx has the most private rooms available, at about 59.76% of all the establishments listed.
- ▶ Each Neighbourhood group has a very small number of shared rooms.



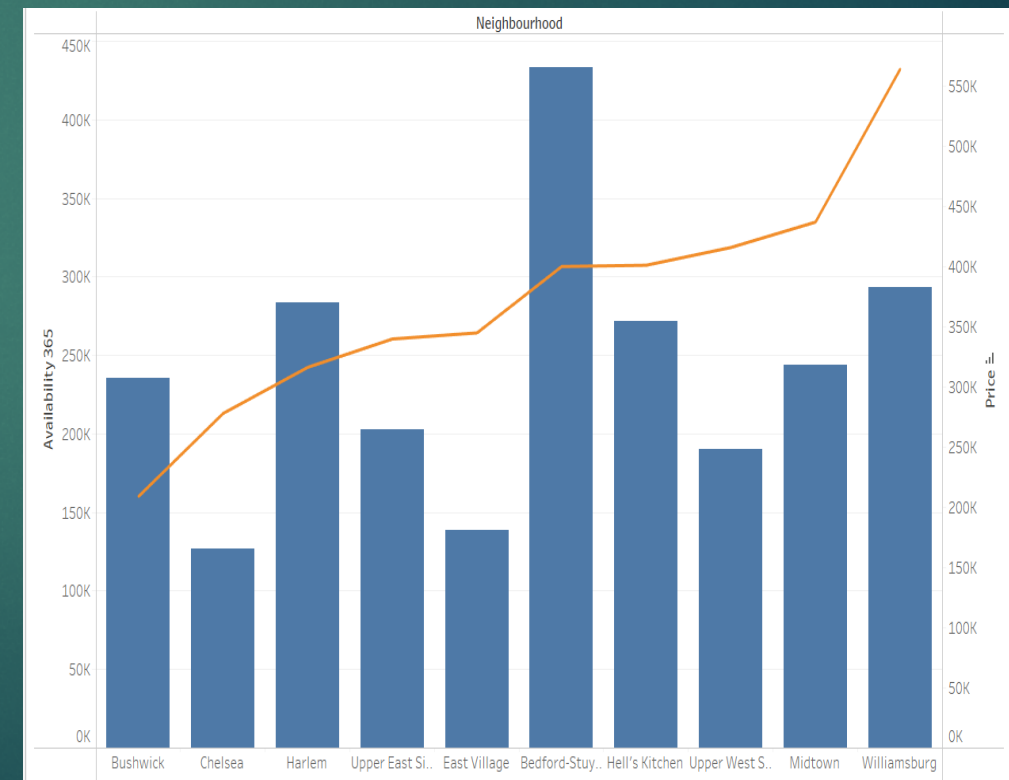
Average price of Neighbourhood groups

- ▶ The average price of listed properties in Manhattan is about 196.9, making it the most expensive of any neighbourhood.
- ▶ Brooklyn has the second highest average price, which is 124.4.
- ▶ The Bronx appears to be a more cheap neighbourhood, as the average price is nearly half that of Manhattan.



Neighbourhood Availability Analysis

- ▶ Bedford has the greatest availability and the lowest price. It is an excellent option for clients.
- ▶ Harlem follows in the footsteps of Bedford.
- ▶ Chelsea's availability is limited, but it is expensive.
- ▶ William, on the other hand, has a high price and middling availability.



Summary

- ▶ To encourage bookings, promote shared rooms with targeted pricing.
- ▶ More hosts and listings with monthly rental durations i.e 30-60-90 can be obtained. The 30-day renting timeframe has a lot of potential for us. Manhattan and Brooklyn have a higher number of 30-day bookings than the other cities; these areas can be further targeted.
- ▶ Weekly or biweekly rentals are also available for consumers detained in NYC for quarantine considerations.
- ▶ As long as the conditions of customer traffic volume and customer satisfaction are met, new acquisitions and expansion can be done for between \$60 and \$200.
- ▶ 'Private rooms' in Manhattan and Brooklyn, as well as 'entire homes' in the Bronx and Queens, are available as new buys. Given the abundance of listings in Manhattan, Brooklyn may be considered for growth.
- ▶ Bookings from customers may rise if more seaside properties are acquired and built.



Thank You!