

BY: AQSA ISHA KHAN  
ASHISH KUMAR JHA  
LAVANYA E

# 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:

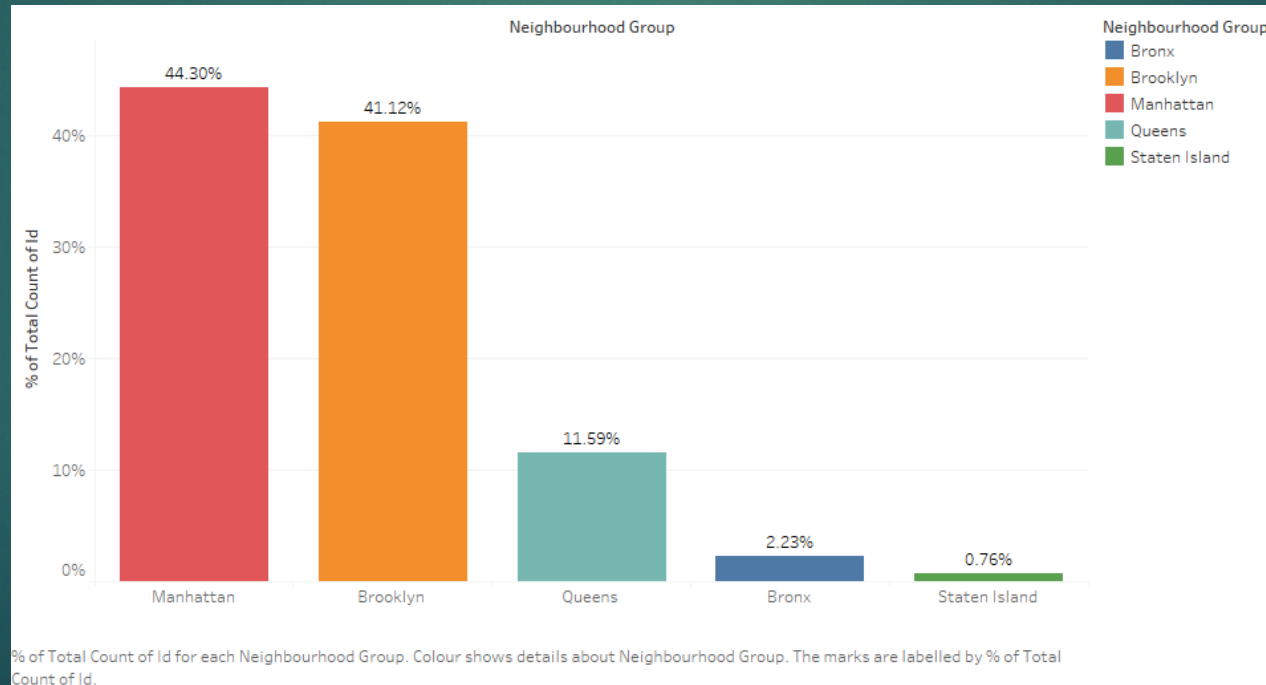
- latitude
- longitude

## Time Variable:

- last\_review

# AirBnb listing distribution in NYC

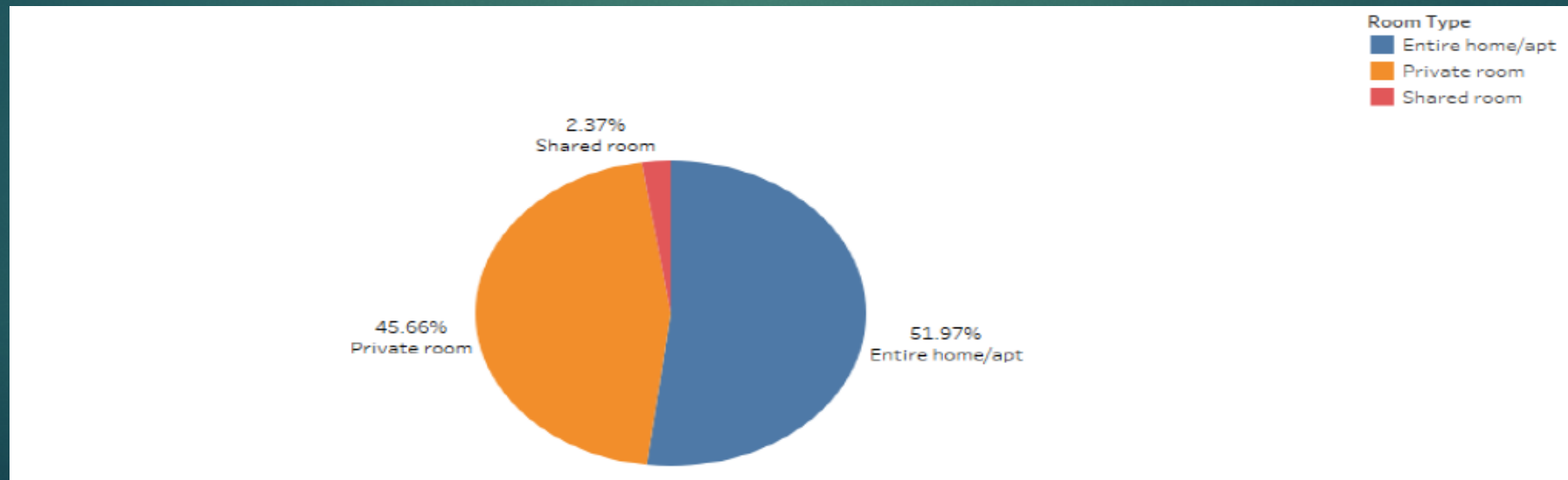
- ▶ Airbnb is well-known in Manhattan, Brooklyn, and Queens.
- ▶ Because of the large population density and the fact that it is the financial and tourism hub of NYC, Manhattan (44%) and Brooklyn (41%) have the most listings. Staten Island (1%), with its low population density and few tourist destinations,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





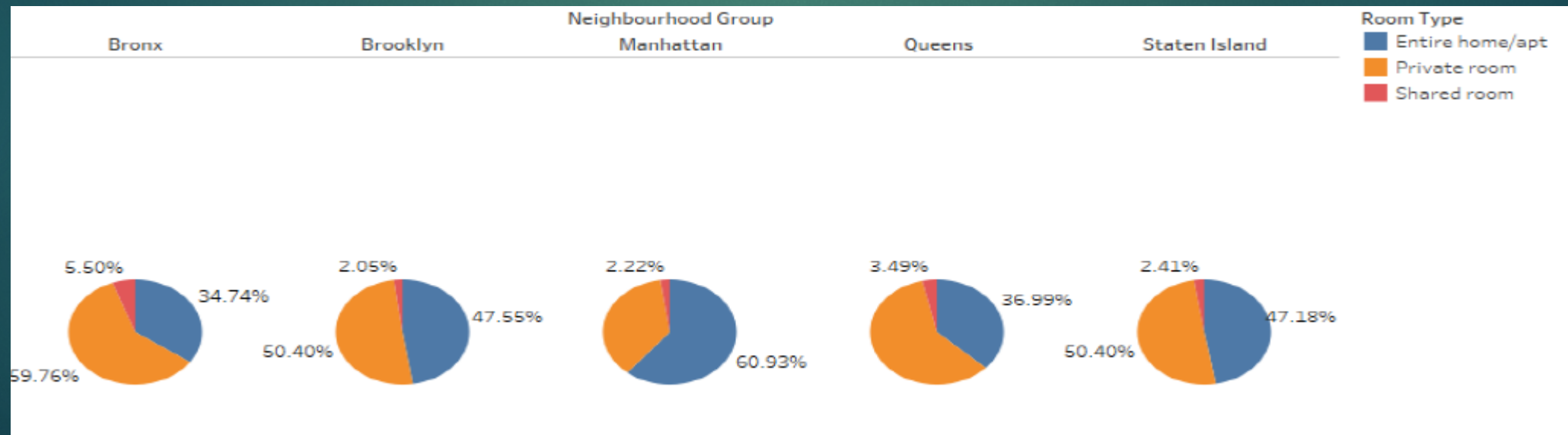
# Room Type Analysis

- ▶ 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

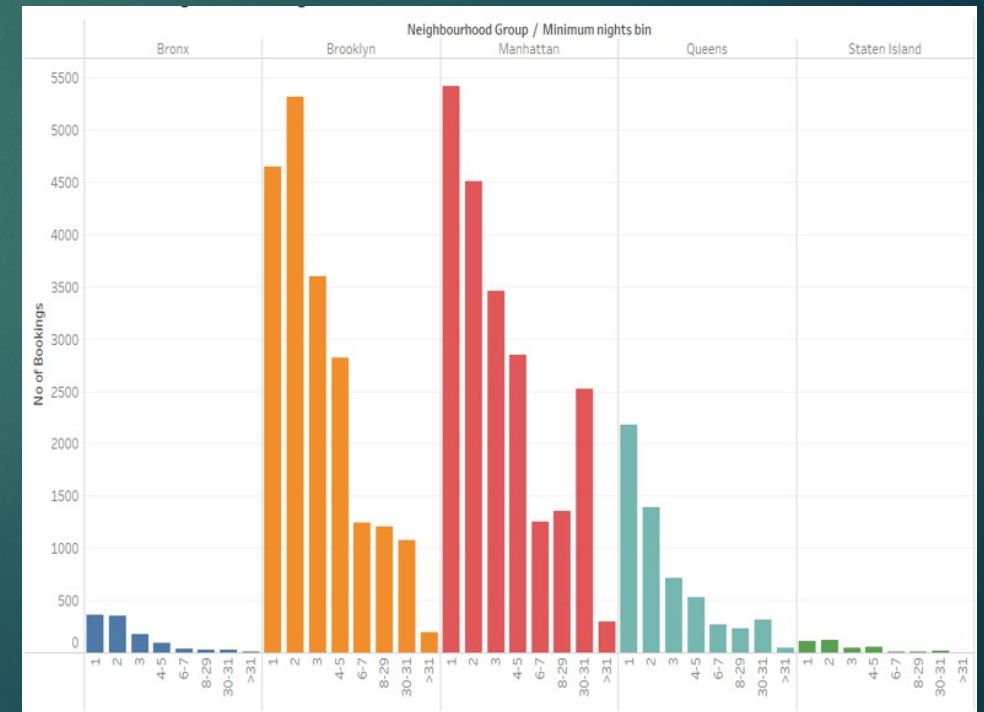
- ▶ Most individuals prefer to reserve the entire home or a private room in Manhattan and Brooklyn, two of the most popular neighbourhood groups.
- ▶ With 60.93% of all listed properties being homes or apartments, Manhattan has the greatest percentage.
- ▶ Bronx has the most private rooms available,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





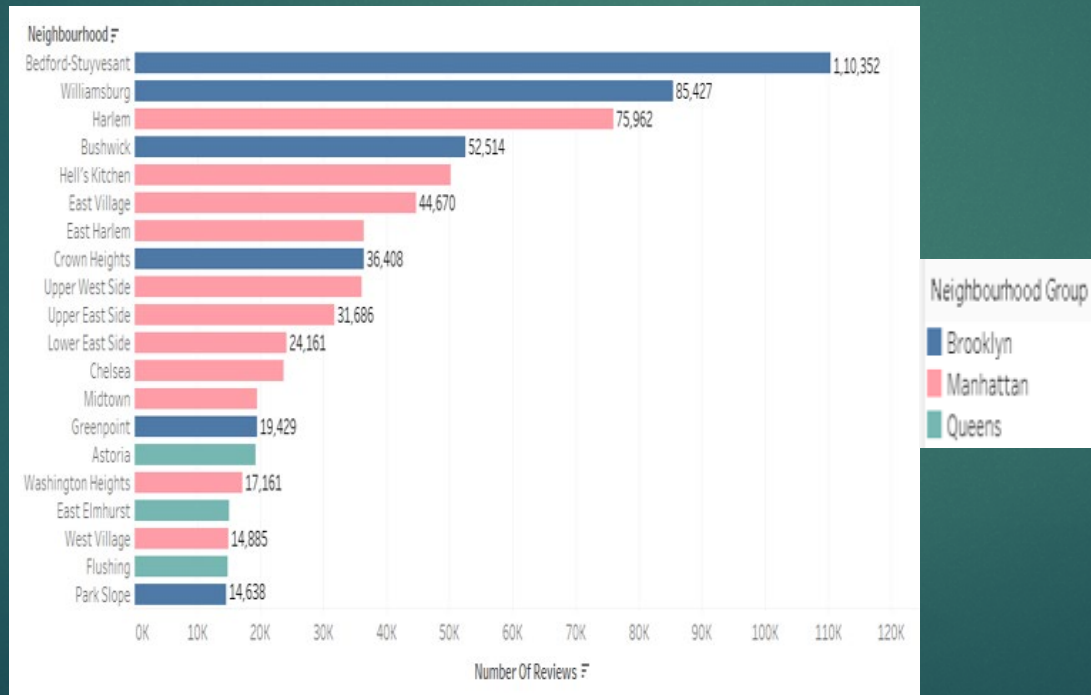
# Customer Booking w.r.t Minimum Nights

- ▶ The most bookings are made for listings with Minimum nights of 1–5. Because clients would rent out on a monthly basis, we can see a noticeable increase in 30 days.
- ▶ Small spikes can also be seen after 30 days; this is also explained by the pattern of monthly rent collection.
- ▶ In comparison to the others, Manhattan and Queens have a higher number of 30-day reservations. The cause may be either long-staying visitors or mid-level employees who choose low-cost accommodations because of business visits.



# Popular Neighbourhood

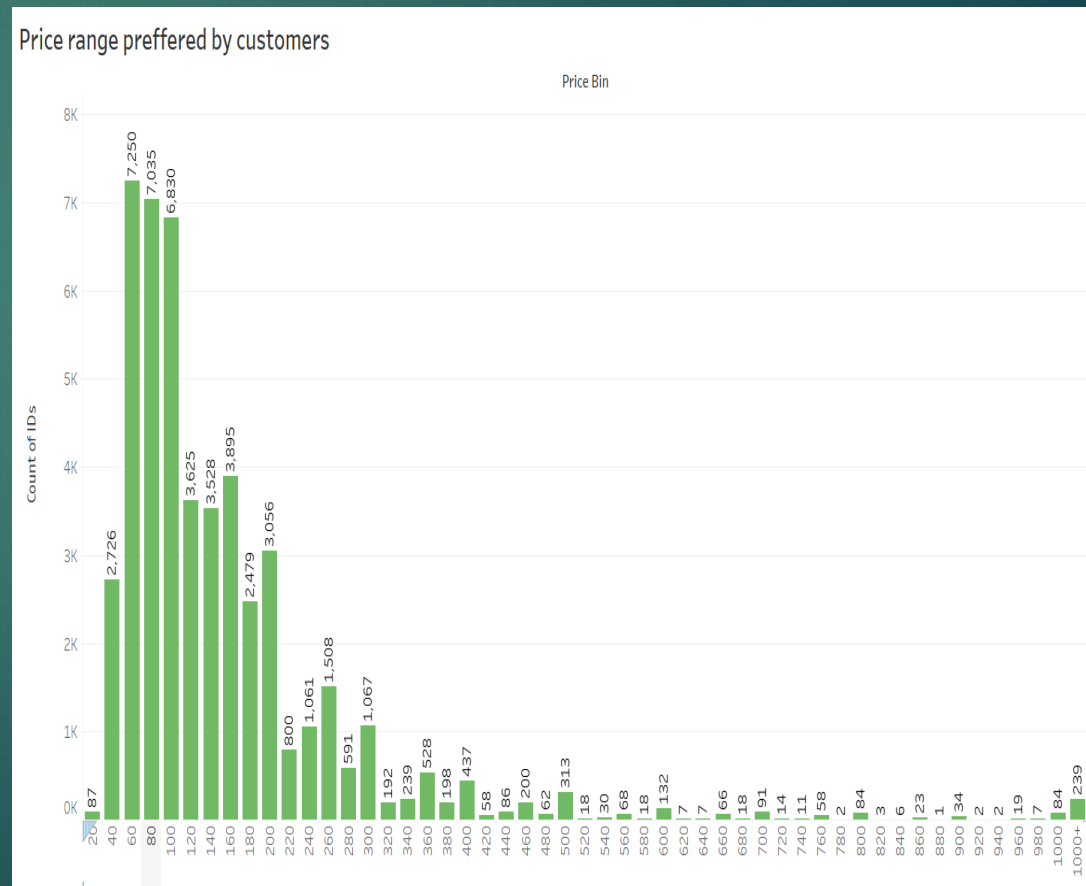
- ▶ Bedford-Stuyvesant in Brooklyn is the most popular, with 1,10,352 total reviews, followed by Williamsburg.
- ▶ Harlem in Manhattan had the most positive feedback, followed by Hell's Kitchen.
- ▶ The greater the quantity of client reviews, the higher the level of satisfaction in these areas.





# Price range preferred by customer

- ▶ Based on the number of reservations made in a certain price range, we have prioritised pricing.
- ▶ The favourable price range is \$60 to \$200 based on both graphs. The majority of buyers favour this pricing range.



# Host with highest listing w.r.t Neighbourhood

- ▶ A total of 327 bookings have been made for host id 219517861.
- ▶ More seasoned hosts have a greater market understanding.
- ▶ We see a single host with numerous listings, mostly in the Manhattan region.
- ▶ This is due to Manhattan having the biggest year-round inflow of tourists and financial aficionados.
- ▶ As a result, buying property nearby will be more advantageous for the host.







Thank You!