



Storytelling Case Study: Airbnb, NYC

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Objective:

- Airbnb is an online platform that allows people to rent out their unused accommodations.
- During the COVID-19 pandemic, Airbnb suffered a significant revenue loss.
- However, with the resurgence of travel, Airbnb is focused on revitalizing its business and is ready to offer services to customers once again.



Background

- For the past few months, Airbnb has experienced a significant decline in revenue.
- Now that travel restrictions are lifting and people are starting to travel more, Airbnb is ensuring it is fully prepared for this shift.
- To this end, an analysis has been conducted on a dataset comprising various Airbnb listings in New York.



Data Preparation

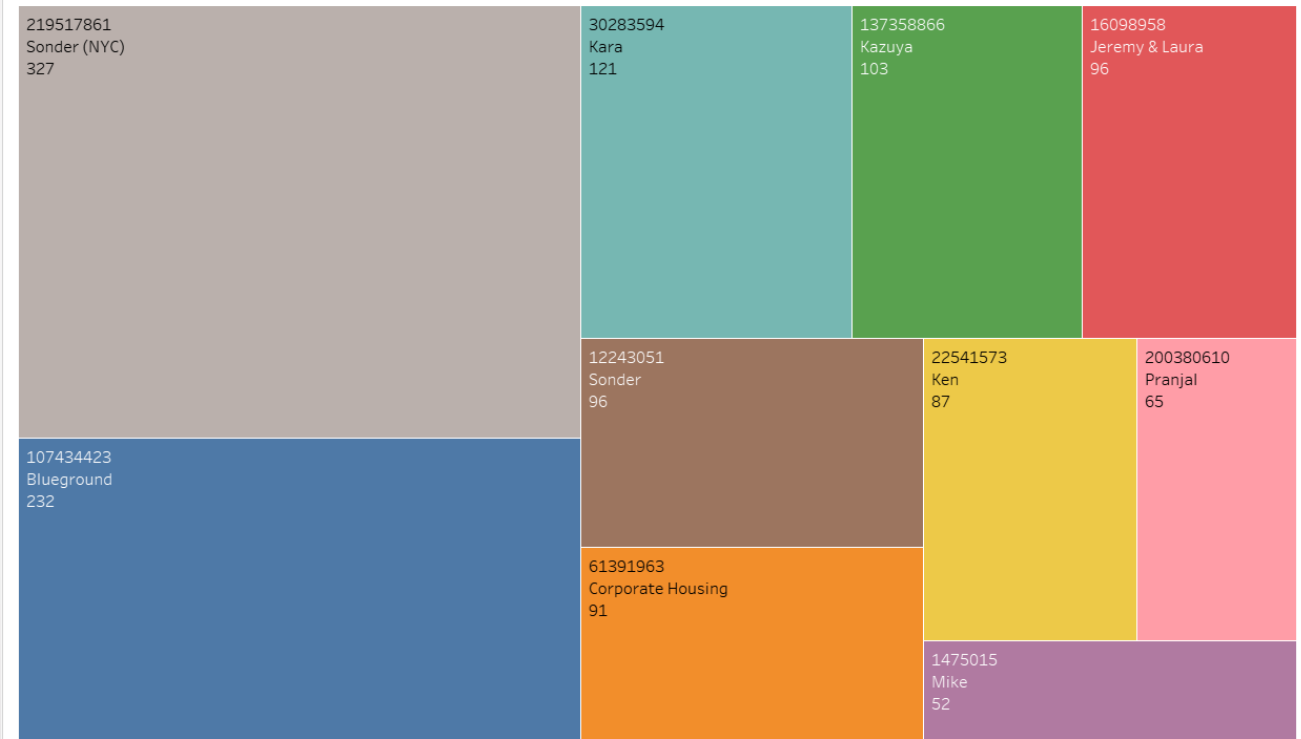
- Imported and studied the data.
- Cleaned the dataset by removing missing values and duplicates.
- Dropped columns deemed insignificant for the analysis.
- Identified and addressed outliers.

Top 10 Host

Here are the points about the top 10 booked hosts:

- Host Sonder (id 219517861) has the highest number of bookings at 327.
- Host Blueground is the second most popular host.
- Other top hosts include Kara, Ken, Pranjal, Jeremy, and Mike, who fall within the top 10 hosts.

Top 10 hosts



Room type with respect to Neighbourhood group

There are three types of rooms:

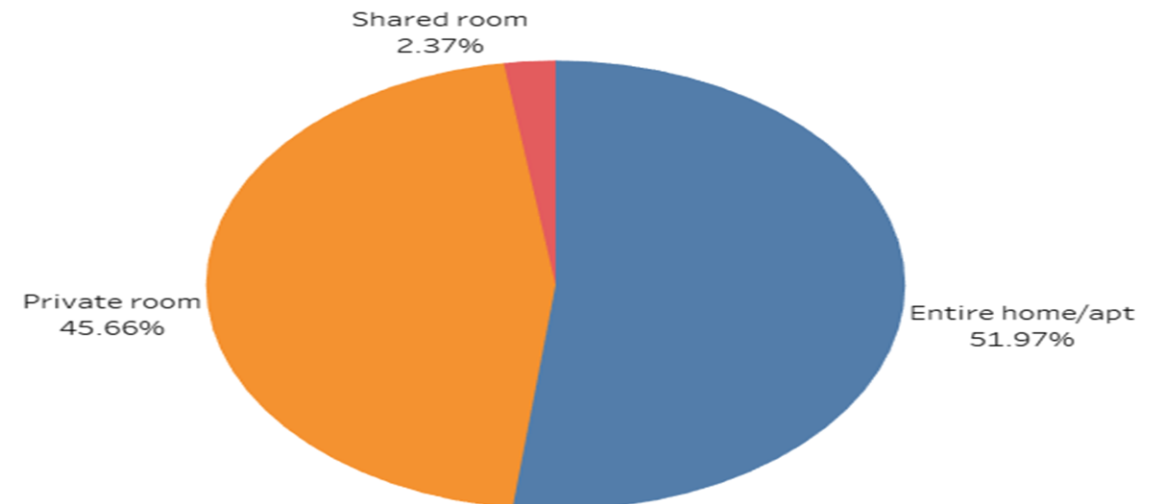
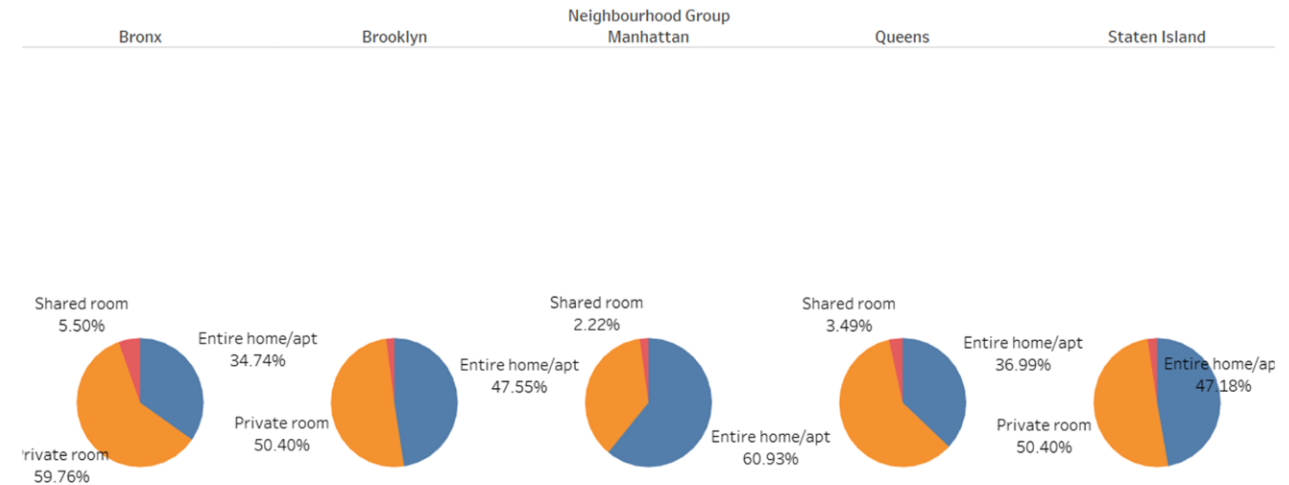
Entire home/Apartment

Private room

Shared room.

- Customers tend to prefer Private rooms (45%) and Entire homes (52%) over Shared rooms (2.4%).
- To boost bookings, Airbnb could offer discounts on Shared rooms and acquire more Private room listings.
- Queens and Bronx each contribute 60% to Private rooms, exceeding the overall ratio of 45%.
- Manhattan has a higher contribution to Entire homes (61%) compared to the combined ratio of 52%.

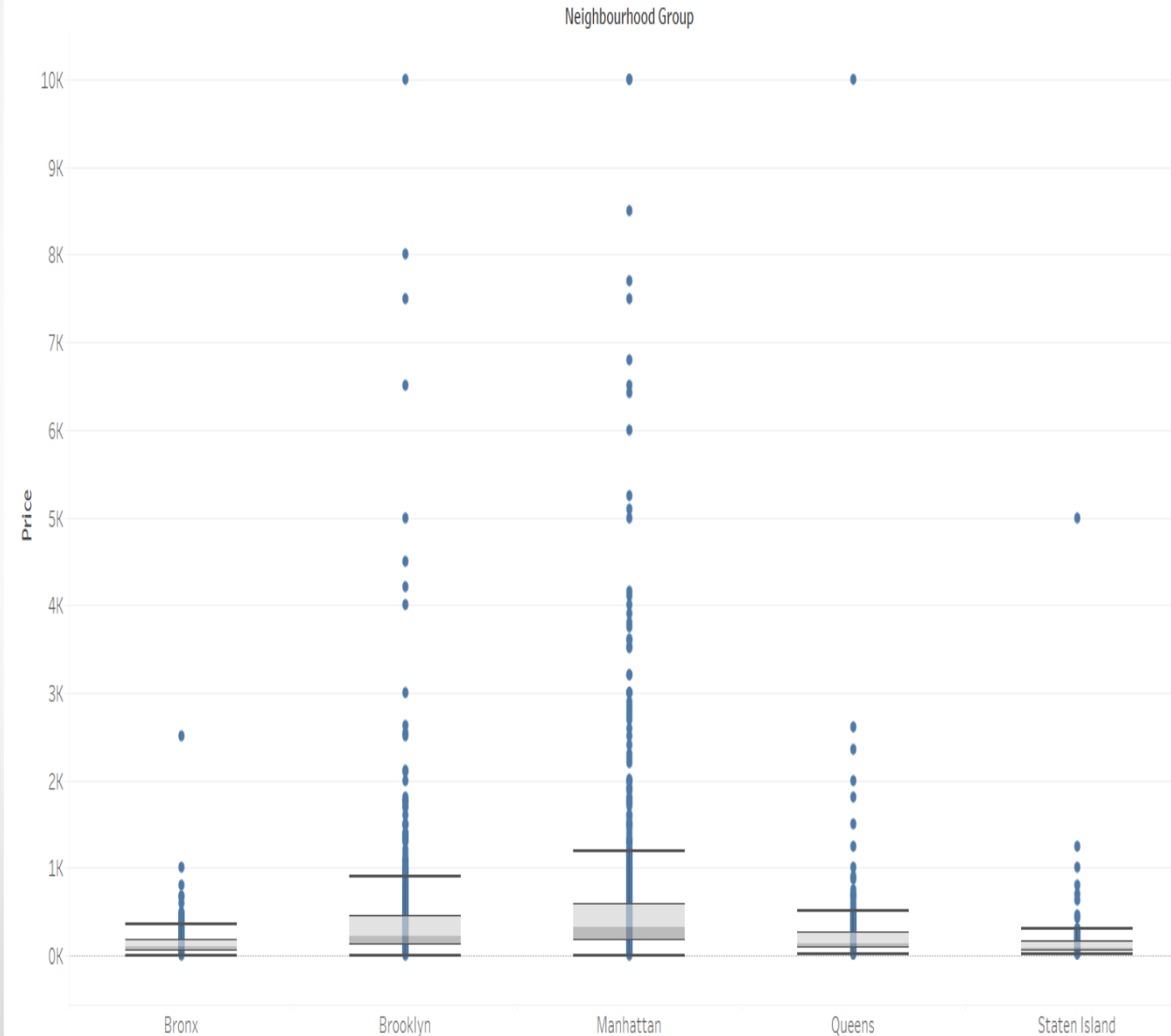
Room Type wrt Neighbourhood group



Price Analysis Neighbourhood wise

- Most of the outliers in the Price column are for Brooklyn and Manhattan.
- Manhattan has the highest range of prices for the listings.
- Bronx is the cheapest of them all.
- The median price for all neighbourhood groups lies between \$80 and \$300.
- Price distribution is highly positively skewed, so the median is close to the lower quartile with some outliers as seen in the boxplot below.

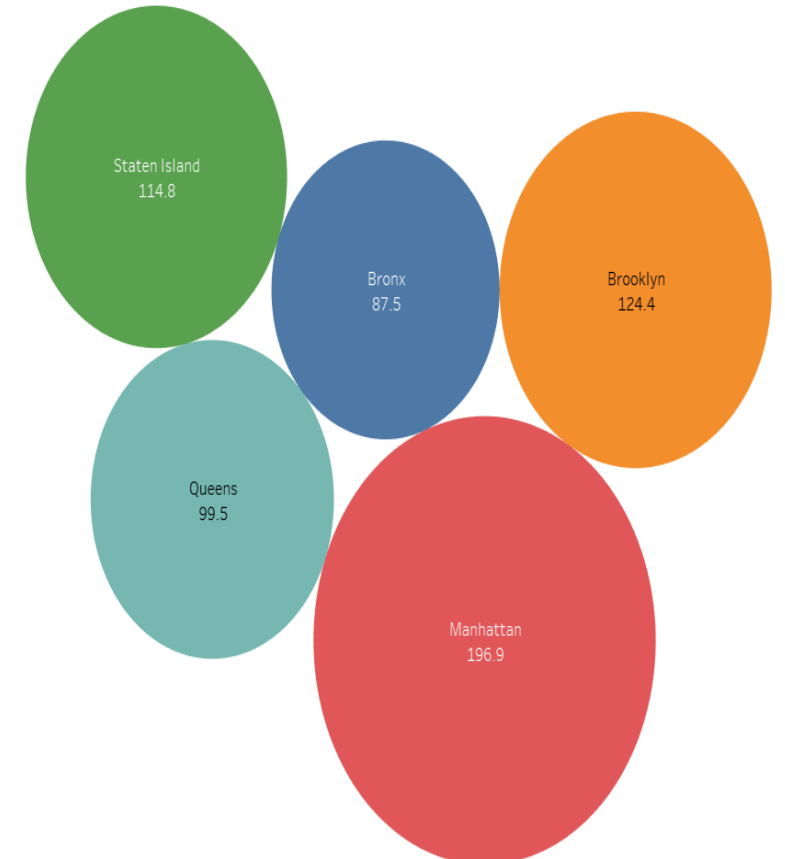
Price Analysis Neighbourhood wise



Average price of Neighbourhood groups

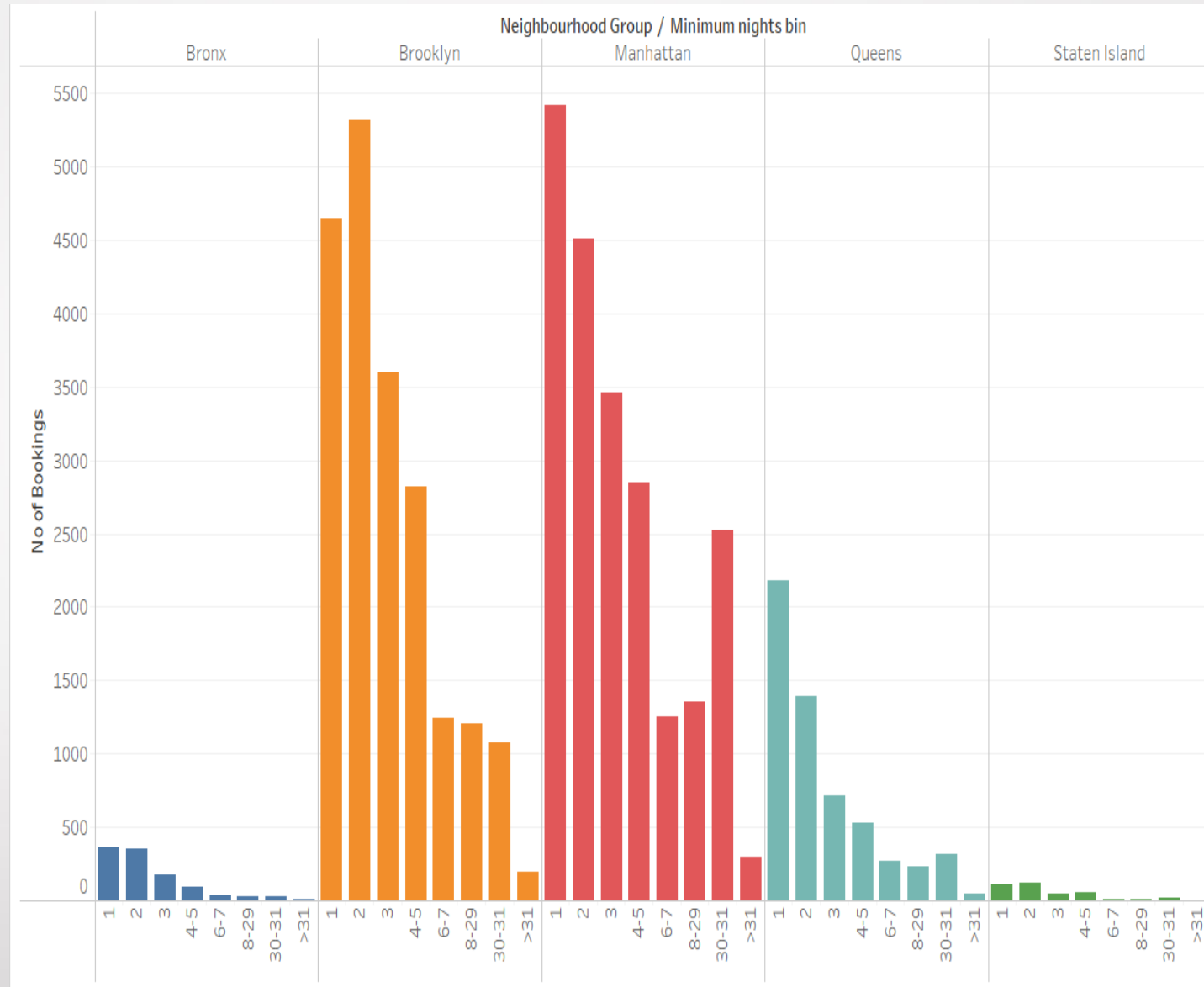
- The average price of listed properties in Manhattan is around \$196.9, the highest among all neighbourhoods.
- The average price for Brooklyn is the second highest, at \$124.4.
- Bronx appears to be an affordable neighbourhood, as the average price is almost half that of Manhattan's average price.

Avg Price Of Neighbourhood group



Customer Booking with respect to minimum nights

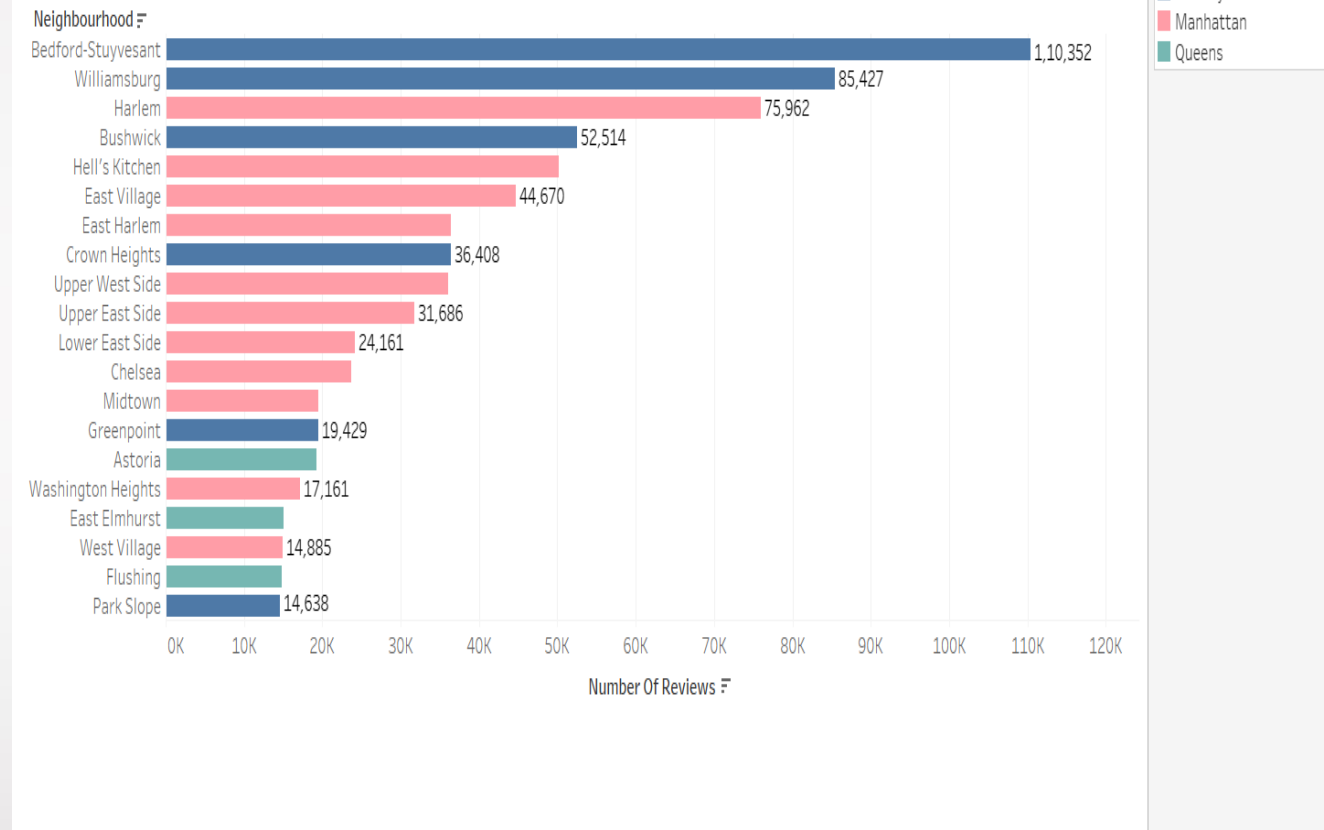
- Listings with minimum nights of 1-5 have the highest number of bookings.
- There is a prominent spike at 30 days, likely due to customers renting on a monthly basis.
- After 30 days, small spikes can be seen, which can also be explained by the trend of monthly rentals.
- Manhattan and Queens have higher numbers of 30-day bookings compared to other areas, possibly due to tourists booking long stays or mid-level employees opting for budget bookings during company visits.



Popular Neighborhoods

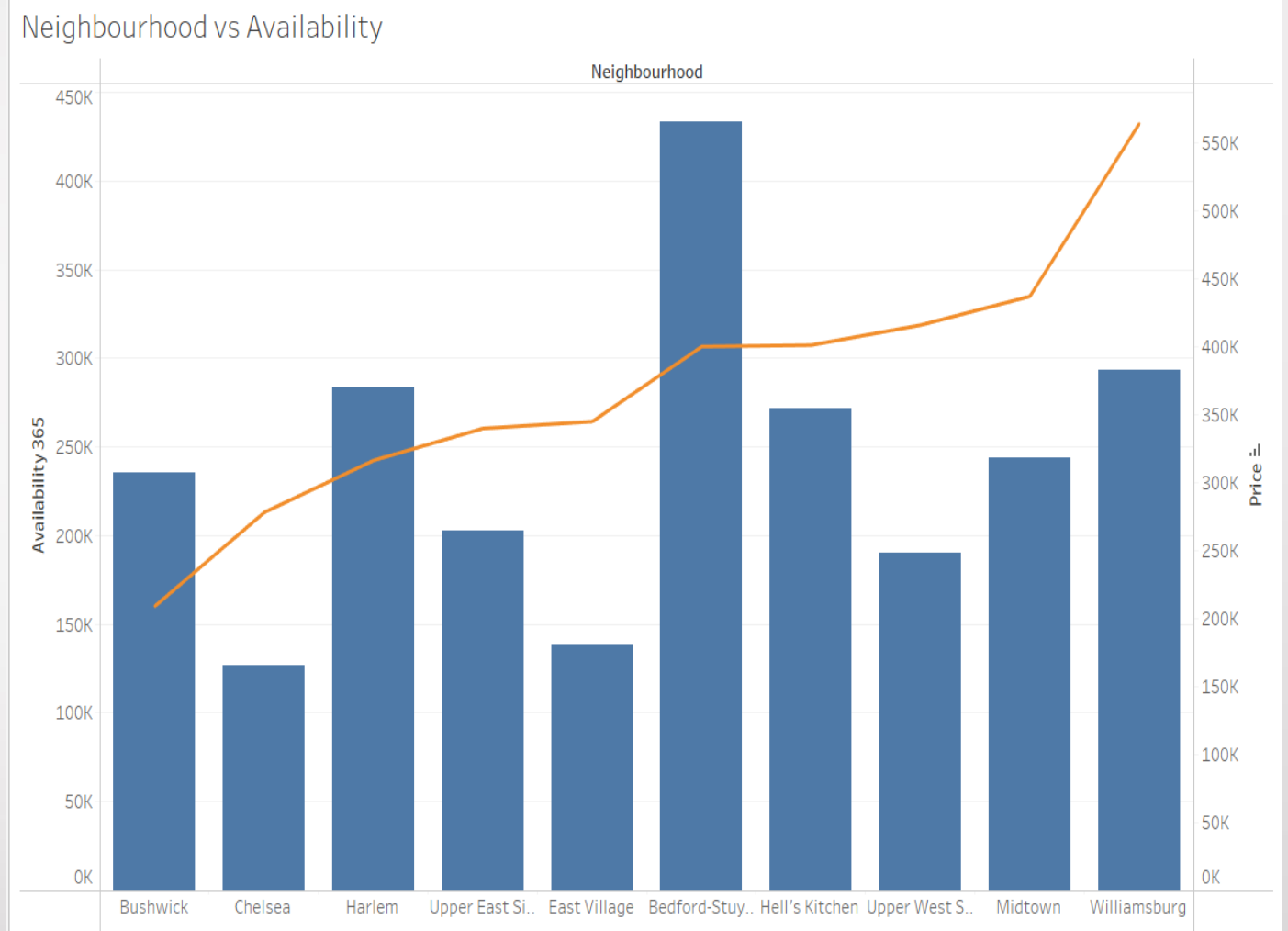
- Bedford-Stuyvesant in Brooklyn is the most popular with a total of 110,352 reviews, followed by Williamsburg.
- In Manhattan, Harlem has received the highest number of reviews, followed by Hell's Kitchen.
- The higher number of customer reviews in these localities indicates higher satisfaction among guests.

Popular Neighbourhoods



Neighbourhood vs Availability

- Bedford has the highest availability and is priced affordably, making it an excellent choice for customers.
- Harlem follows a similar trend to Bedford, offering ample availability and reasonable pricing.
- Chelsea has low availability but comes with a higher cost compared to Bedford and Harlem.
- Williamsburg is priced higher despite having average availability.





Thank You