

Storytelling Case Study: Airbnb, NYC

By : Riya Tyagi
Sandesh Rathod
&
Devesh Singh

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 boroughs: 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 center for the financial services industry. It’s also the heartbeat of the American media, entertainment (along with California), telecommunications, law and advertising industries.

Objective:

- ▶ Airbnb is an online platform using which people can rent their unused accommodations.
- ▶ During the covid time, Airbnb incurred a huge loss in revenue.
- ▶ People have now started travelling again and Airbnb is aiming to bring up the business again and they ready to provide services to customers.

Background

- ▶ 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.

Data Preparation

- ▶ Cleaned data to remove any missing values and duplicates.
- ▶ Dropped insignificant columns.
- ▶ Identified outliers

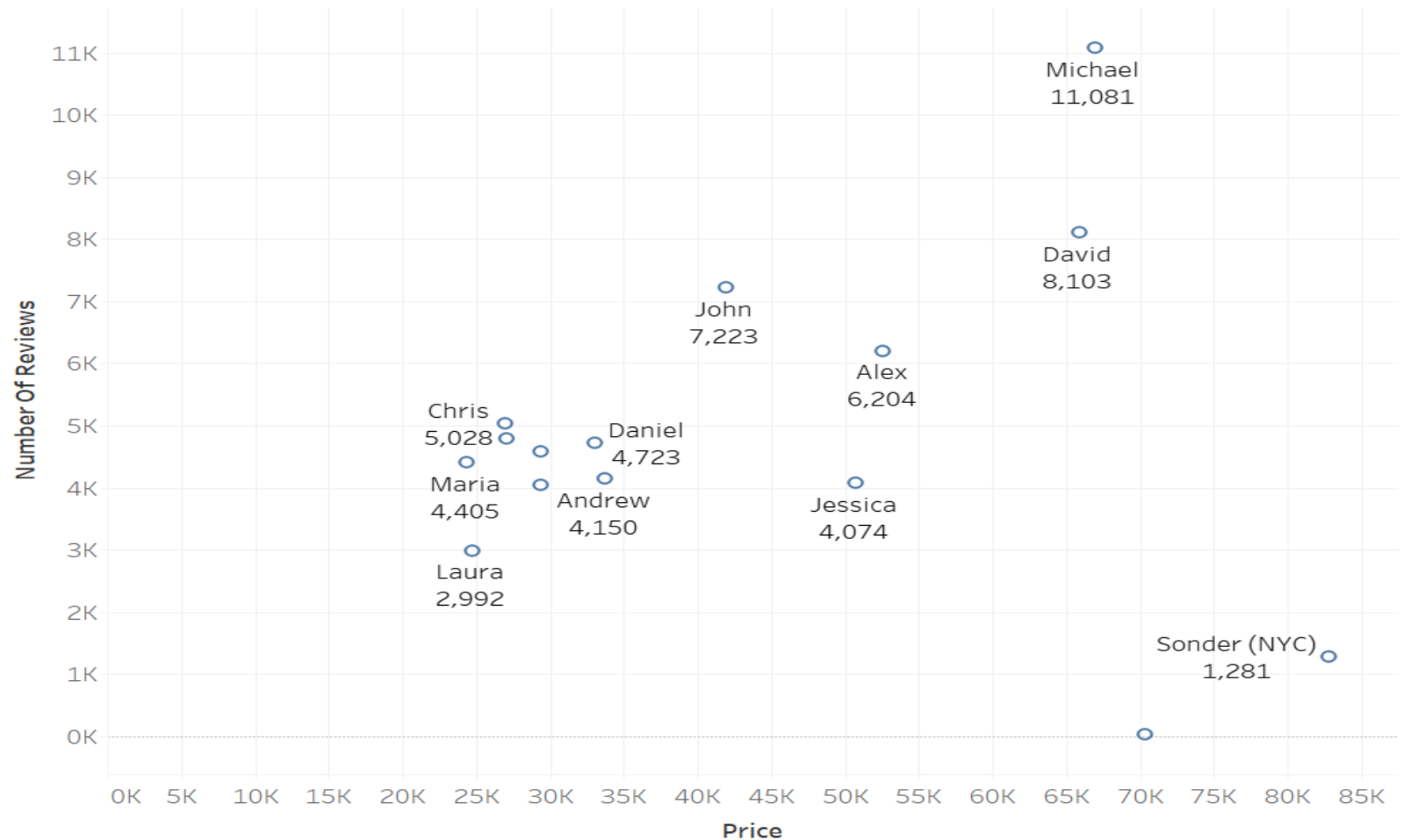
Key Insight

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

- TOP 15 HOST HAVE RECEIVED HIGHEST NUMBER OF REVIEWS?
- How are the Airbnb listings spread out in NYC?
- Preferred Room type with respect to Neighbourhood group
- Customer Booking w r t minimum nights
- Neighbourhood vs Availability
- Popular Neighbourhoods
- Average Price According To Neighbourhood And Neighbourhood Group

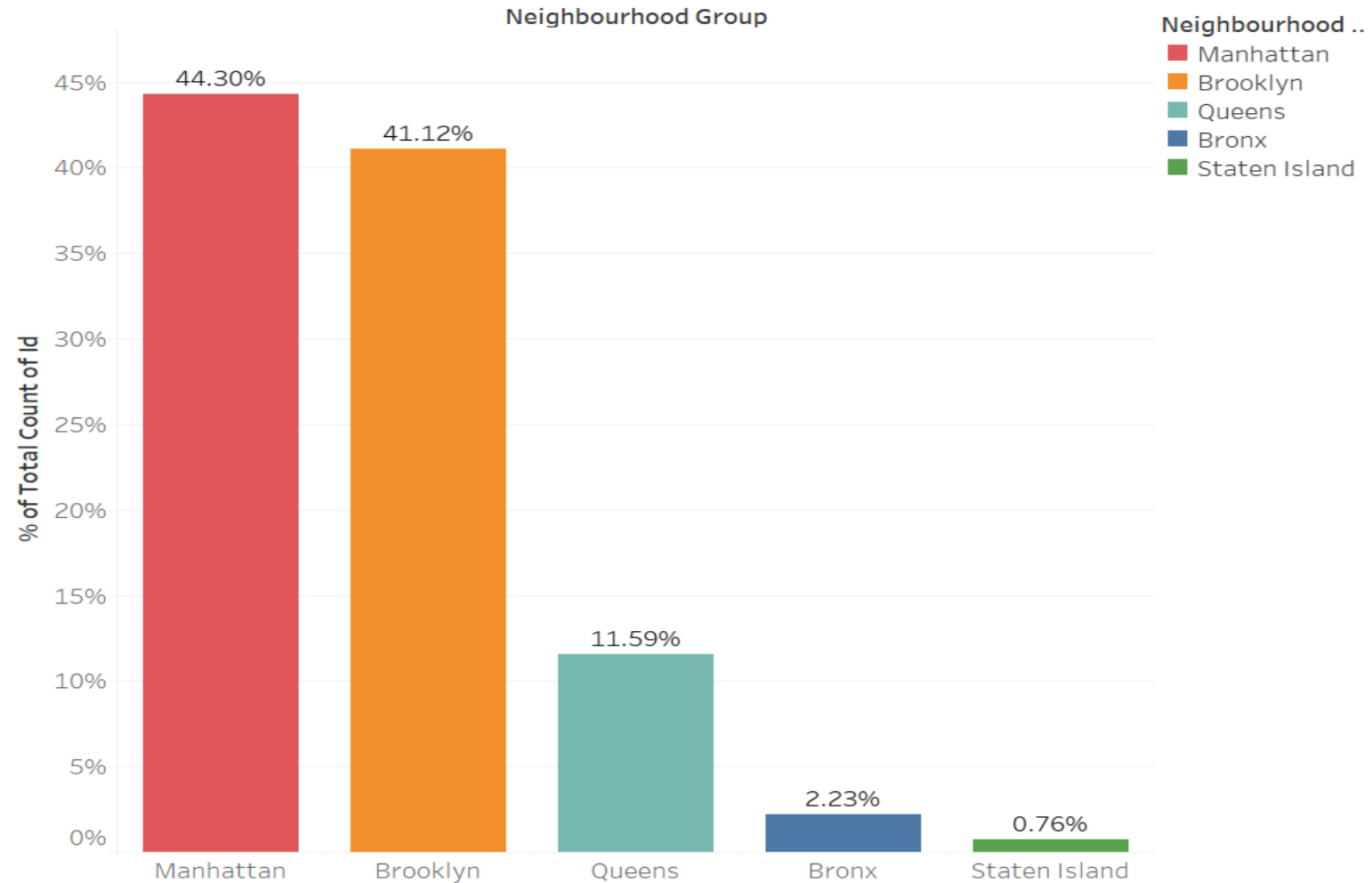
TOP 15 HOST HAVE RECEIVED HIGHEST NUMBER OF REVIEWS

- ❑ Michael, David, Alex, John, and Daniel are the Top 5 hosts that seem to have received the highest number of reviews for their listed sites and have also sites listed with a High price range.
- ❑ Michael is a Top most Host with 11,081 Number of reviews



Airbnb listings spread out in NYC

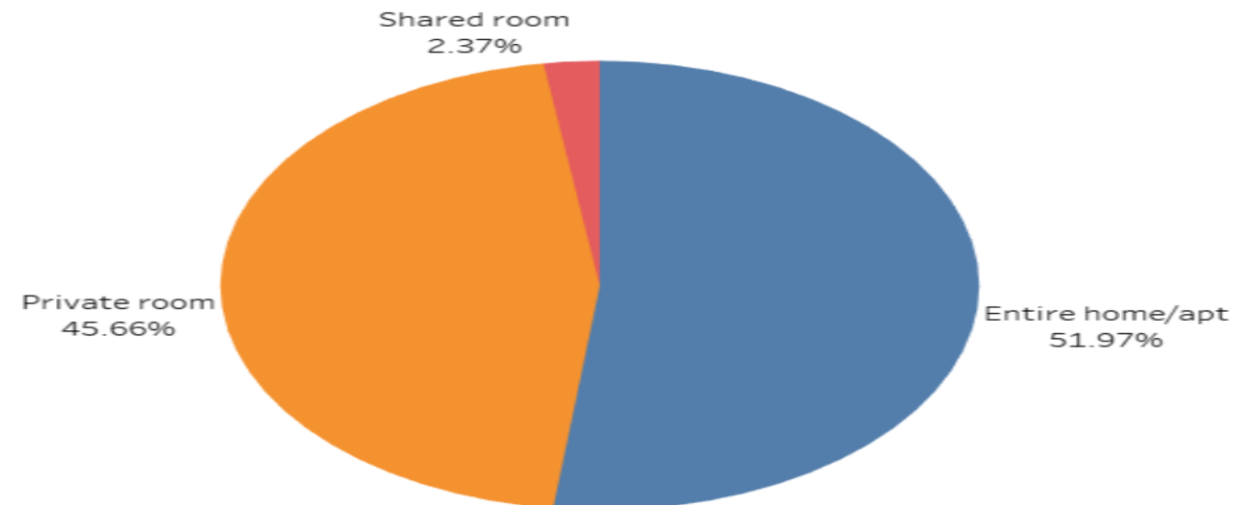
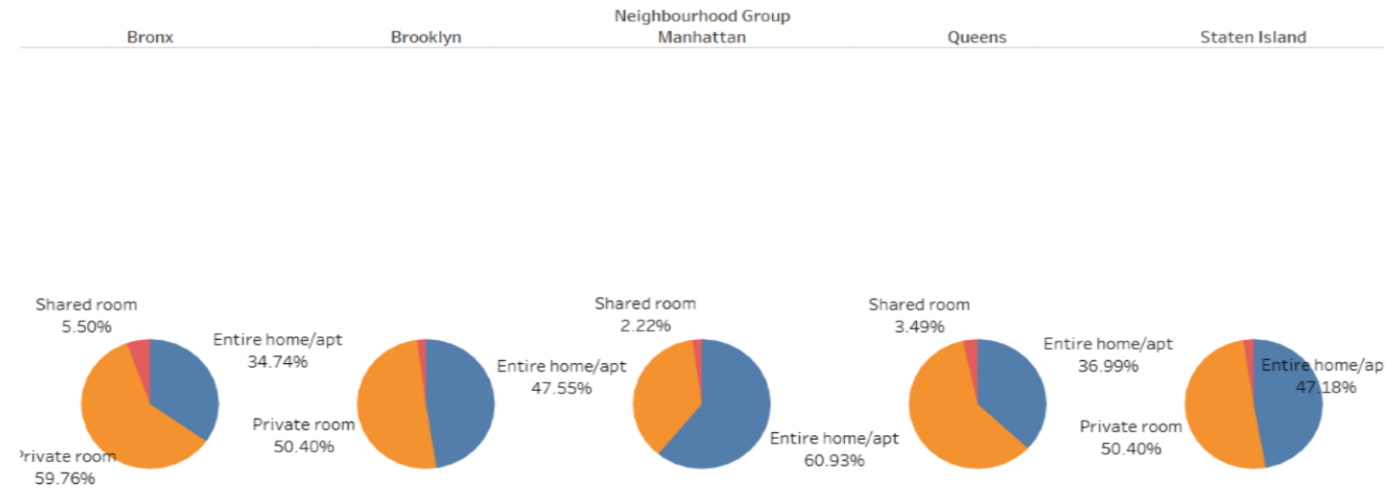
- ❑ We see that, Airbnb has good presence in Manhattan, Brooklyn & Queens
- ❑ Listings are maximum in Manhattan (44%) & Brooklyn (41%) owing to the high population density and it being the financial and tourism hub of NYC. Staten Island (~1%) has the least number of listings, due to its low population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



Preferred Room type with respect to Neighbourhood group

- ❑ There are 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 concentrate on promoting shared rooms with discounts to increase bookings and also acquire more private listings.
- ❑ 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%.

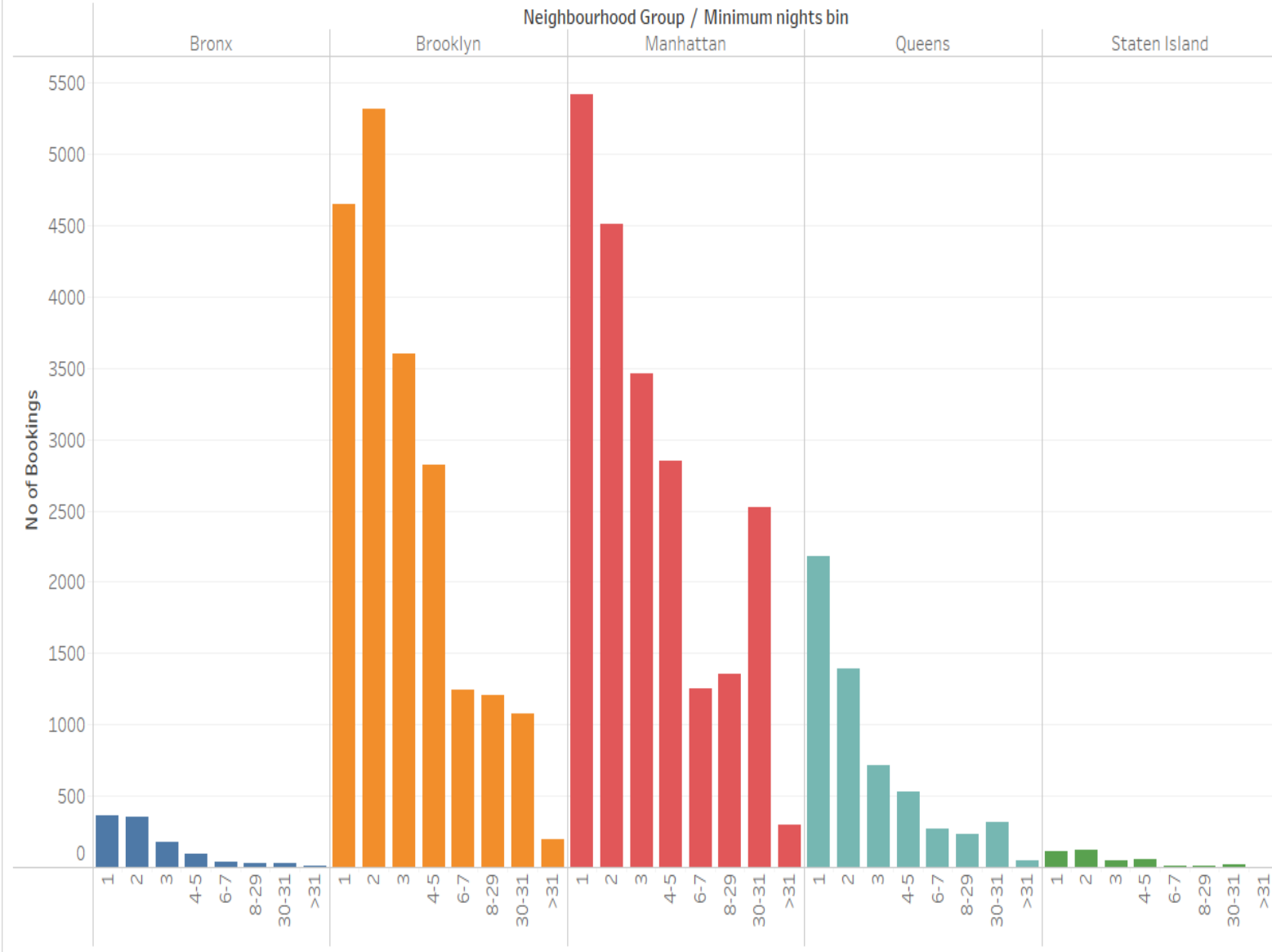
Room Type wrt Neighbourhood group



Customer Booking with respect to minimum nights

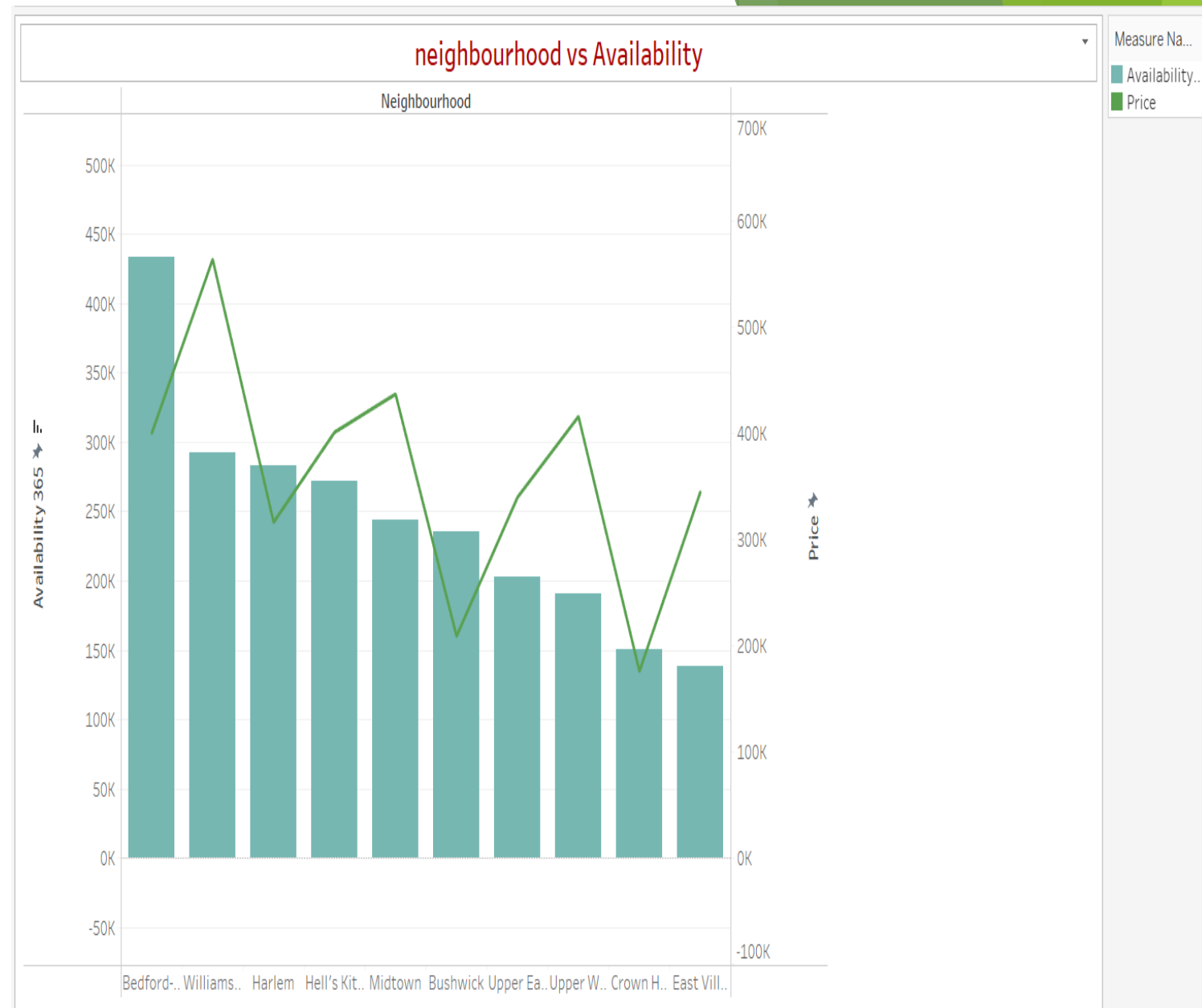
- ❑ The listings with Minimum nights 1-5 have the most number of bookings. We can see a prominent spike in 30 days, this would be because customers would rent out on a monthly basis.
- ❑ After 30 days, we can also see small spikes, this can also be explained by the monthly rent taking trend.
- ❑ Manhattan & Queens have higher number of 30 day bookings compared to the others. The reason could be either tourists booking long stays or mid-level employees who opt for budget bookings due company visits

Customer booking w r t min nights



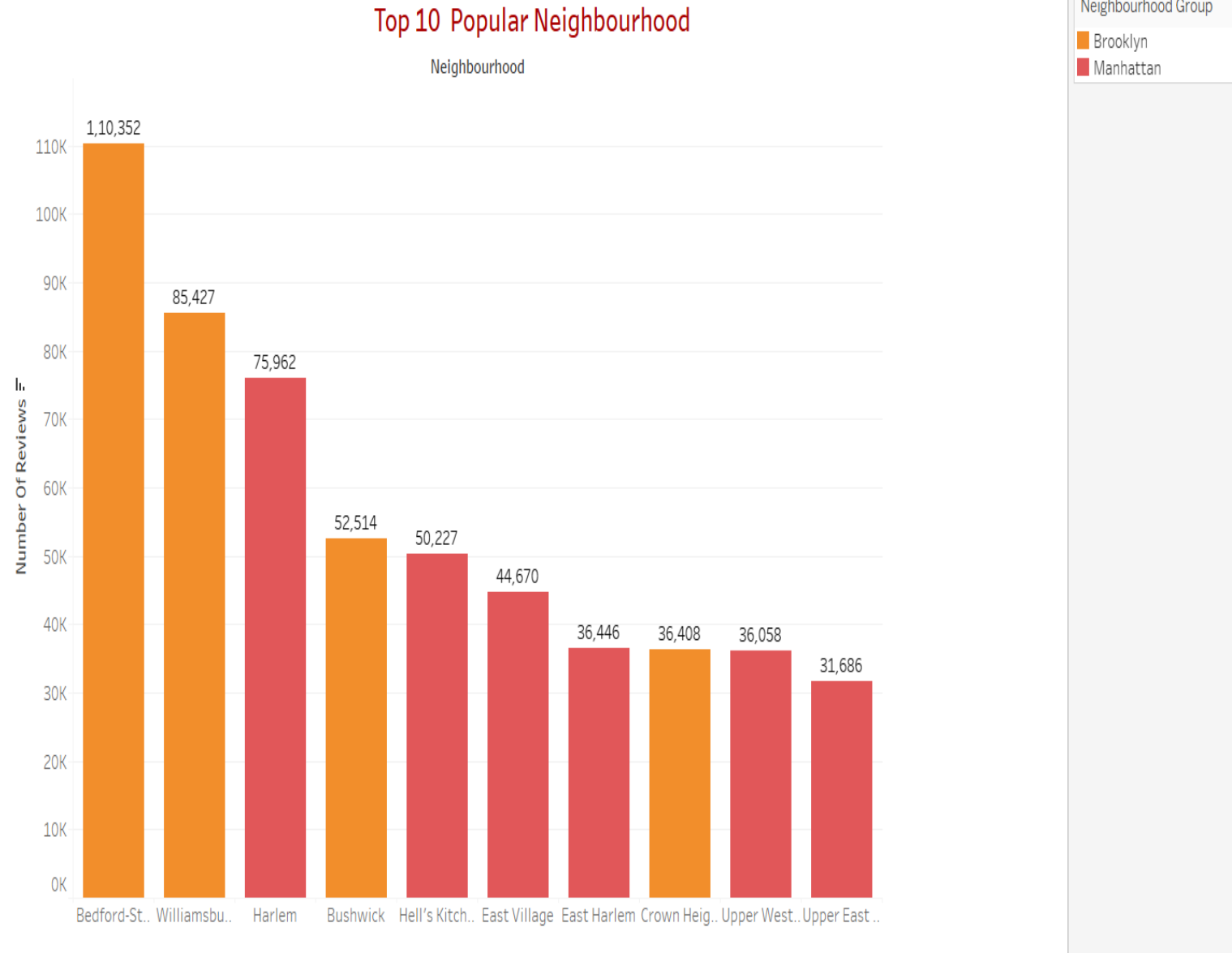
Neighbourhood vs Availability

- ❑ Availability of Bedford is highest and its price is on the lower side. It is a good choice for customers.
- ❑ After Bedford, Harlem follows the same trend.
- ❑ East Village availability low but it is costly.
- ❑ On the other hand, William's price is high and has average availability.



Popular Neighborhoods

- ❑ We see that Bedford-Stuyvesant from Brooklyn is the highest popular with 1,10,352 no of reviews in total followed by Williamsburg.
- ❑ Harlem from Manhattan got the highest no of reviews followed by Hell's kitchen.
- ❑ The higher number of customer reviews imply higher satisfaction in these localities.

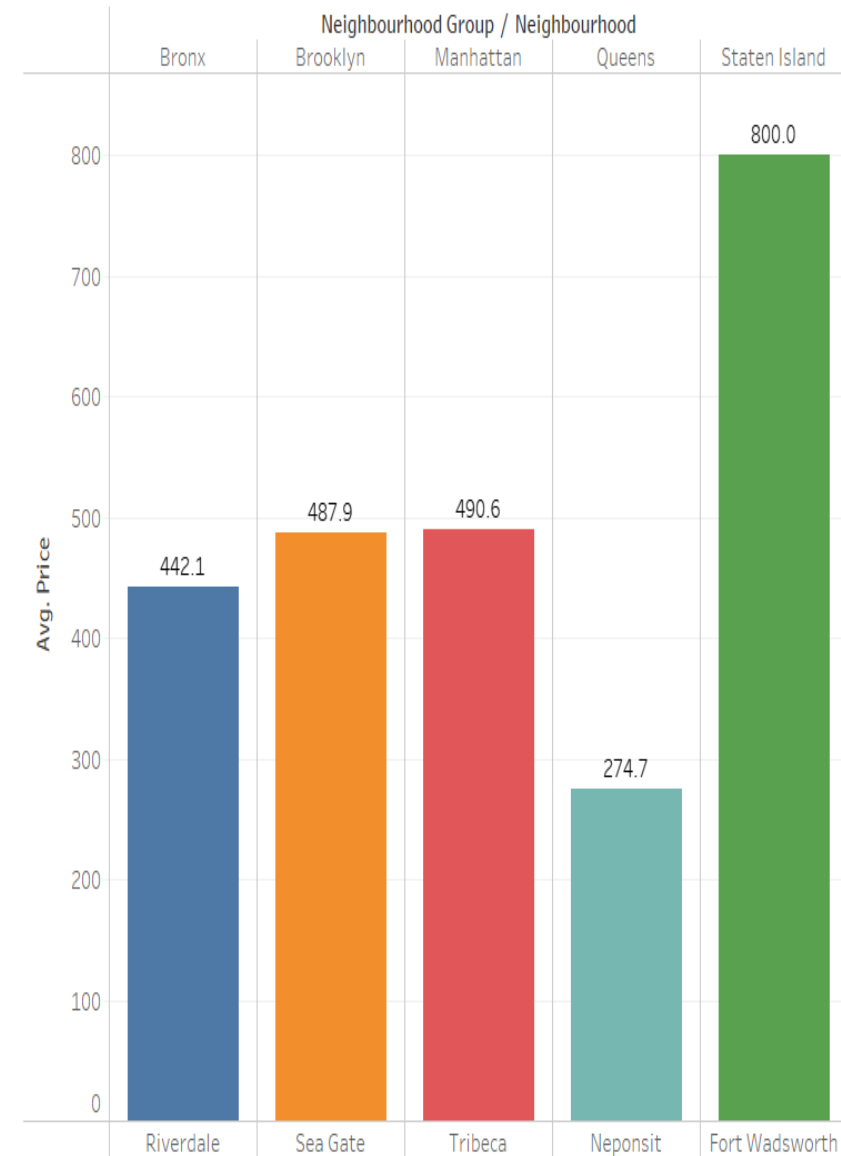


Average Price According To Neighbourhood And Neighbourhood Group

Neighbourhood Group	Neighbourhood	Average price
State Island	Fort Wadsworth	800.0
Manhattan	Tribeca	490.6
Brooklyn	Sea Gate	487.9
Bronx	Riverdale	442.1
Queens	Neponsit	274.7

State Island with Fort Wadsworth neighbourhood is highest average price among all group

Average Price according To neighbourhood And Neighbourhood Group



THANKYOU