



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

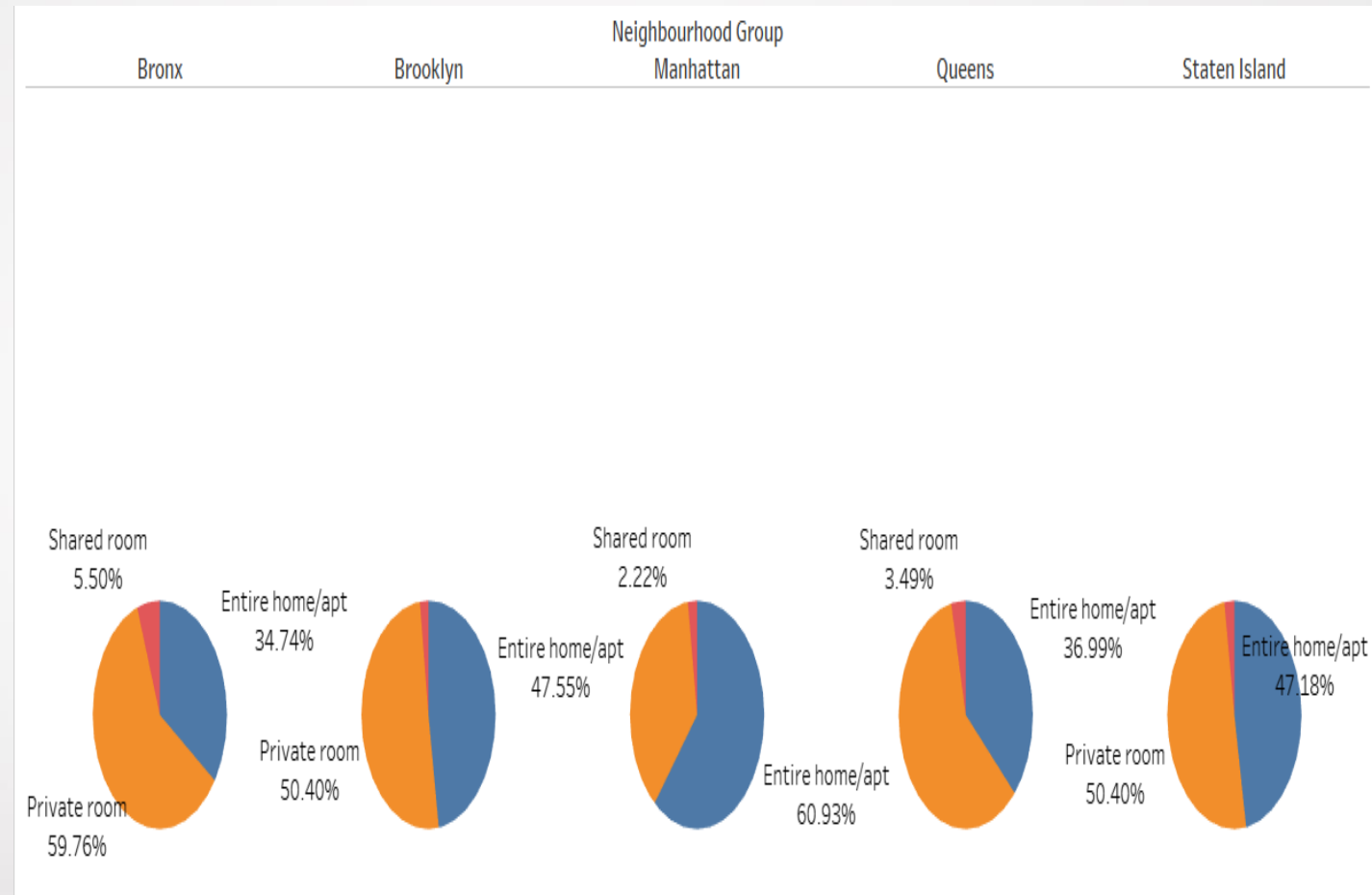
- For the past few months, Airbnb has experienced a significant decline in revenue.
- Now that travel restrictions are lifting and people are starting to travel more, Airbnb is ensuring it is fully prepared for this shift.
- To this end, an analysis has been conducted on a dataset comprising various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

Room type with respect to Neighbourhood group

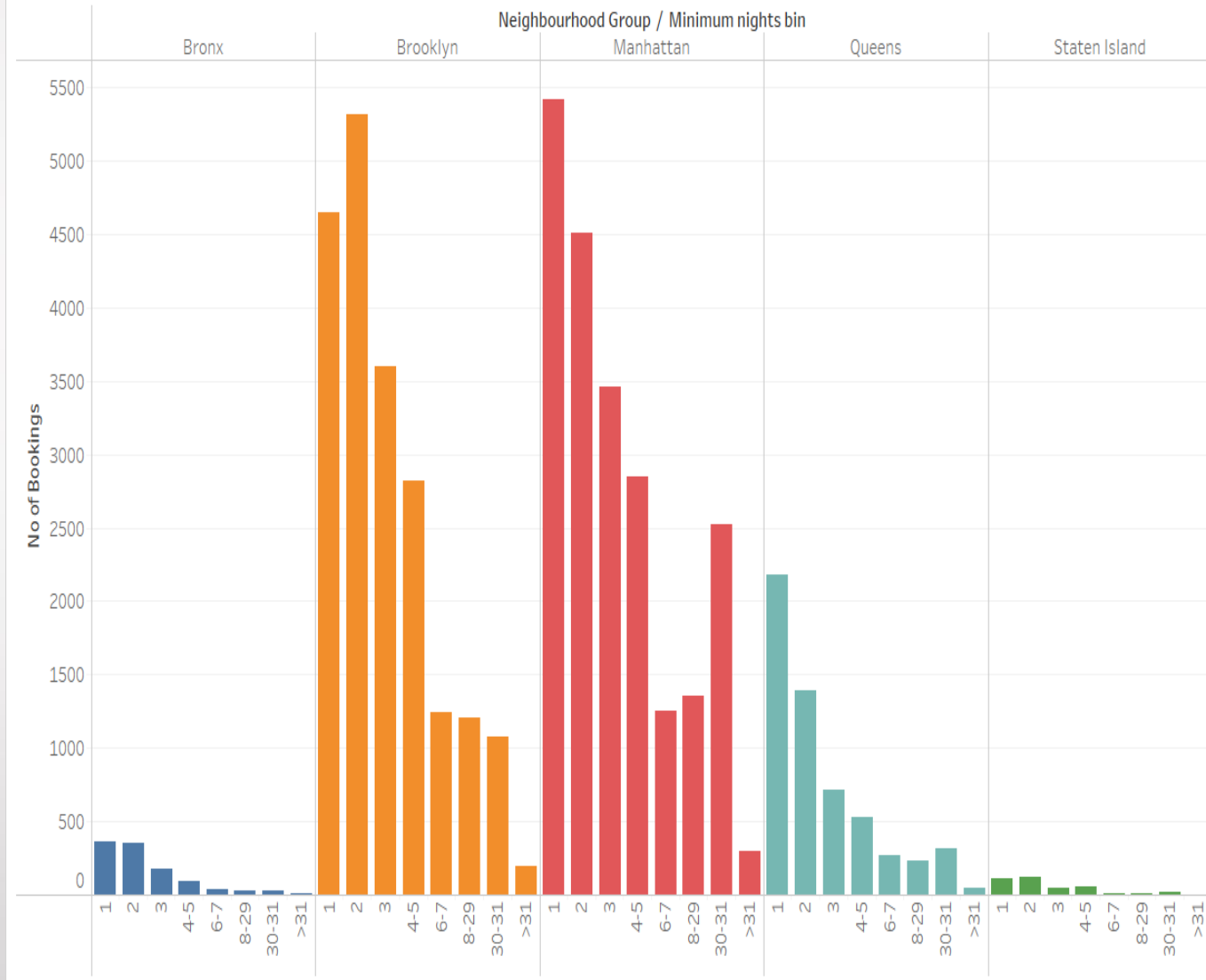
- Manhattan and Brooklyn are popular neighborhood groups, with most people preferring to book the entire home or a private room.
- Manhattan has the highest number of home/apartment properties, accounting for 60.93% of the total listed properties.
- The maximum number of private rooms are available in the Bronx, making up approximately 59.76% of the total listed properties.
- Shared rooms are available in very limited numbers across each neighborhood group.



Customer Booking with respect to minimum nights

- Listings with minimum stays of 1-5 nights receive the highest number of bookings, indicating popularity among short-term renters.
- There is a notable spike in bookings for 30-day stays, likely due to customers renting on a monthly basis.
- Additionally, smaller spikes after the 30-day mark suggest a continued trend towards monthly rentals.
- Manhattan and Queens show higher numbers of 30-day bookings compared to other areas, possibly due to tourists seeking extended stays or mid-level employees opting for budget accommodations during business visits.

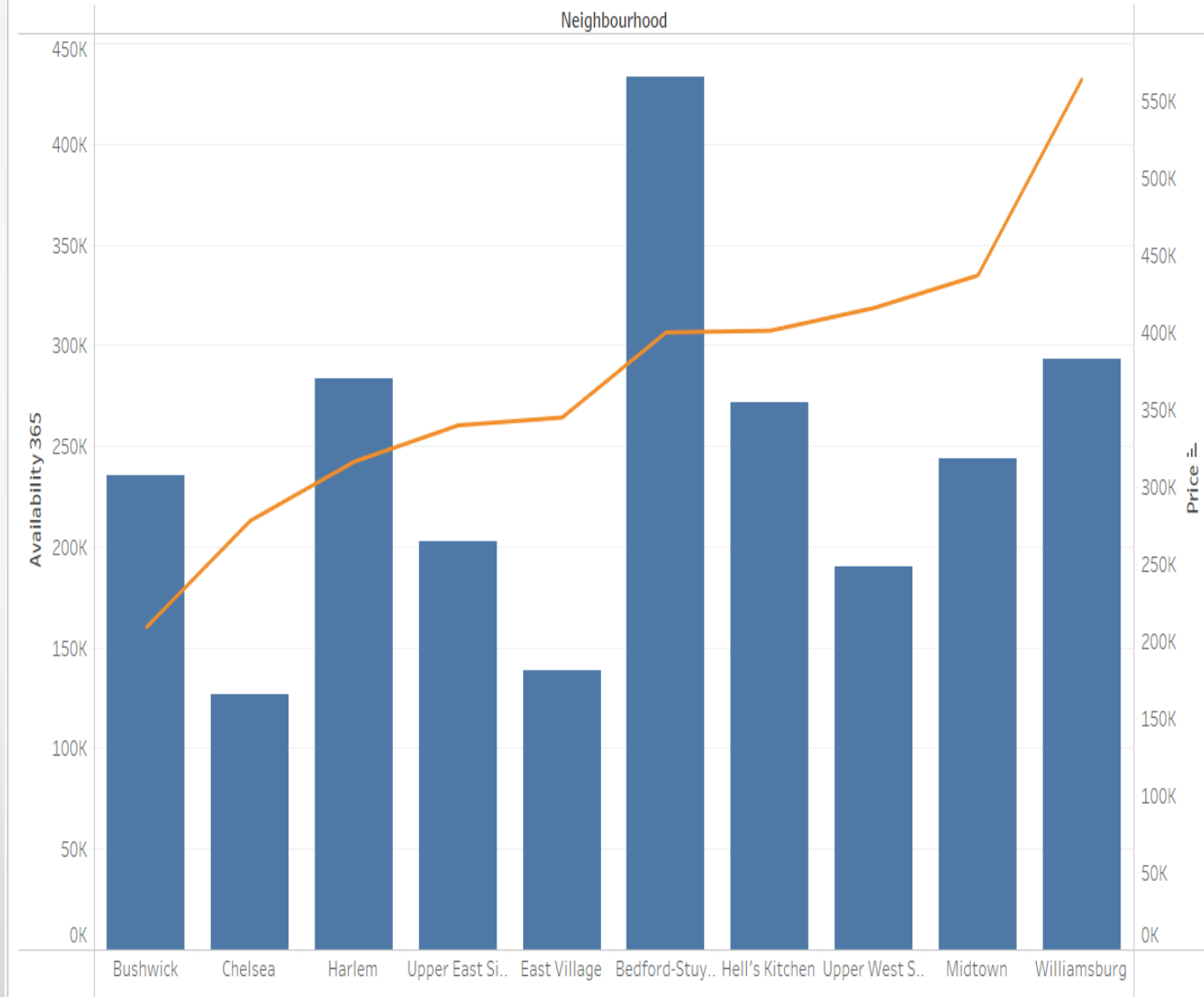
Customer booking w r t min nights



Neighbourhood vs Availability

- Bedford offers the highest availability and is priced affordably, making it a favorable choice for customers.
- Harlem also shows high availability and relatively lower pricing, following a similar trend to Bedford.
- Chelsea, while costly, has limited availability.
- Conversely, Williamsburg has higher pricing despite having average availability.

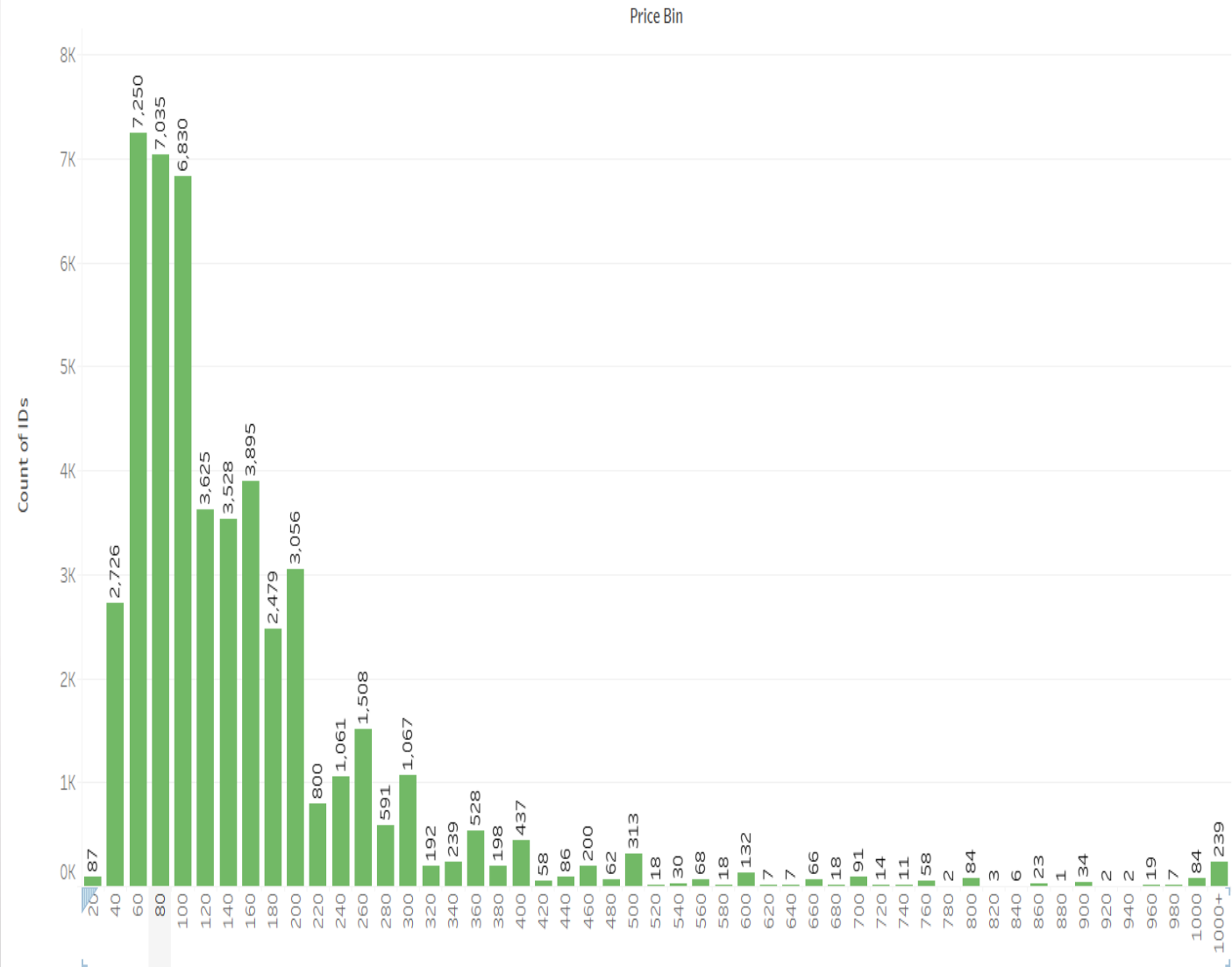
Neighbourhood vs Availability



Price range preferred by Customers

Based on the volume of bookings in different price ranges, the preferred pricing range is between \$60 and \$200. This range is favored by the majority of customers.

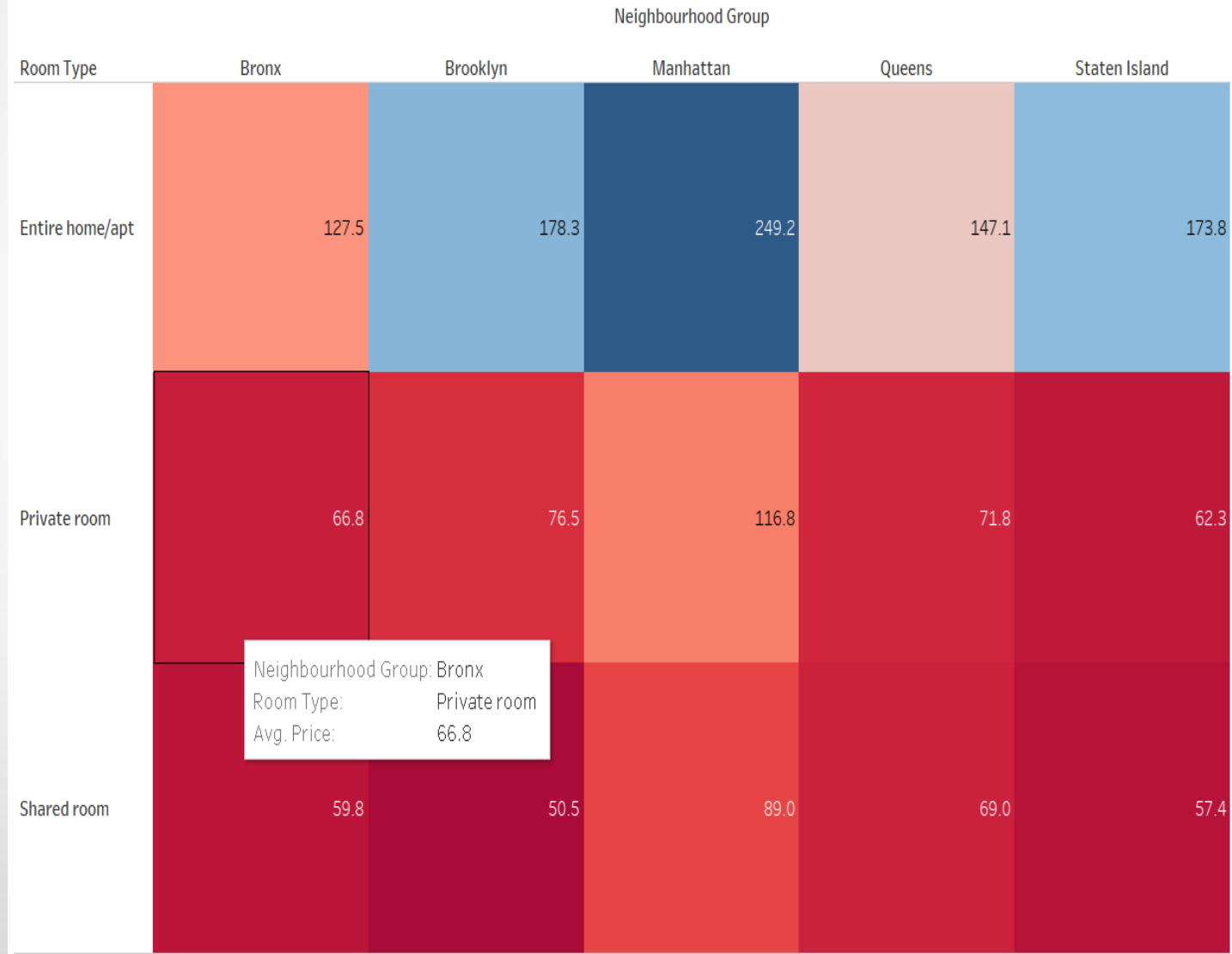
Price range preferred by customers



Understanding Price variation w.r.t Room Type & Neighbourhood

- The 'Entire home/apt' room type in Manhattan is the most expensive at \$250, significantly higher than the overall average.
- 'Private rooms' in Manhattan and Brooklyn have the highest average prices.
- 'Shared rooms' are the cheapest in Brooklyn, priced at \$50.5 on average.

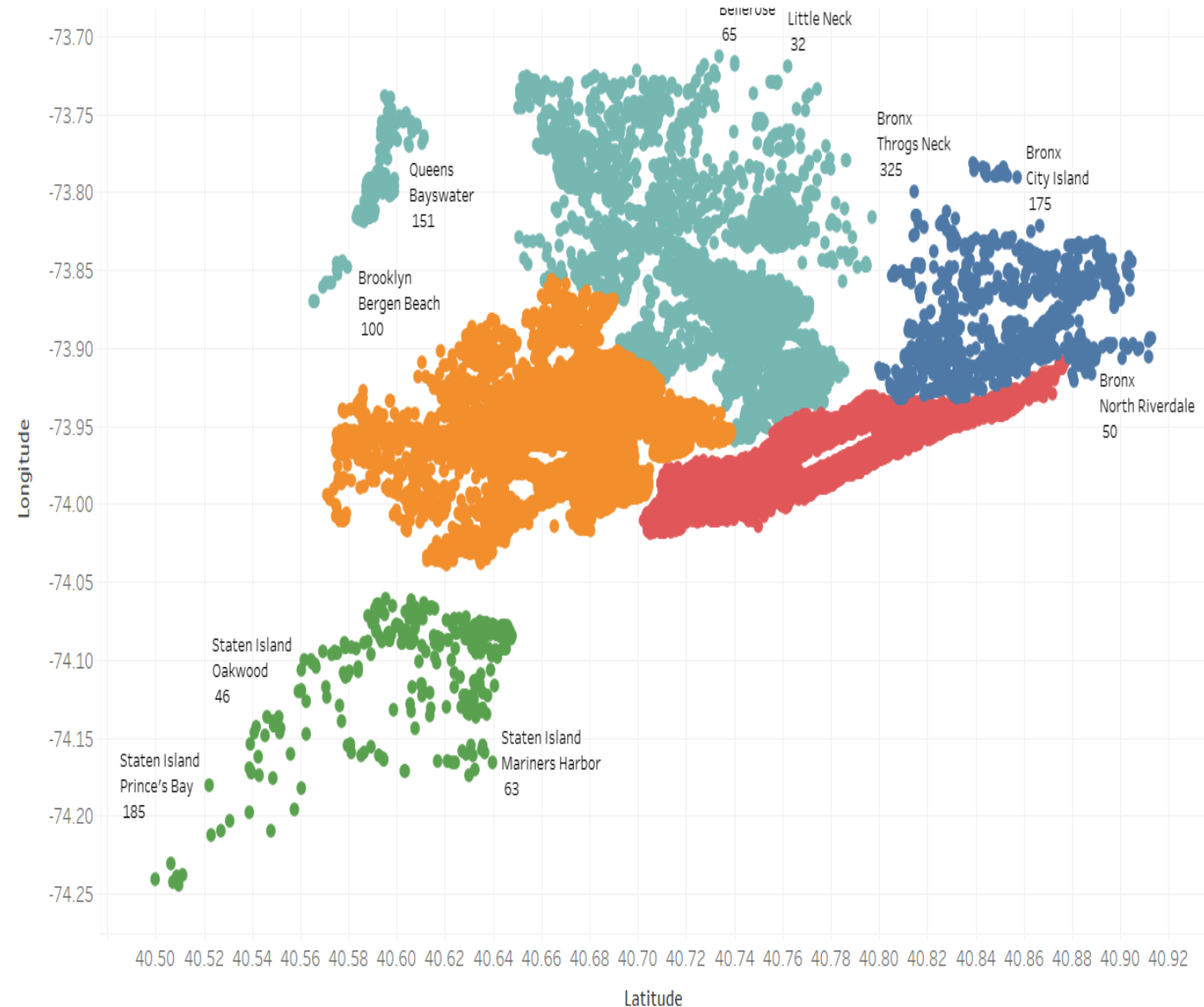
Understanding Price variation w.r.t Room Type & Neighbourhood



Price variation with respect to Geography

- Airbnb has a strong presence in Manhattan, Brooklyn, and Queens. Listings are most abundant in Manhattan and Brooklyn, attributed to their high population density and status as financial and tourism hubs of NYC.
- In contrast, Staten Island has the fewest listings, reflecting its lower population density and fewer tourist attractions.

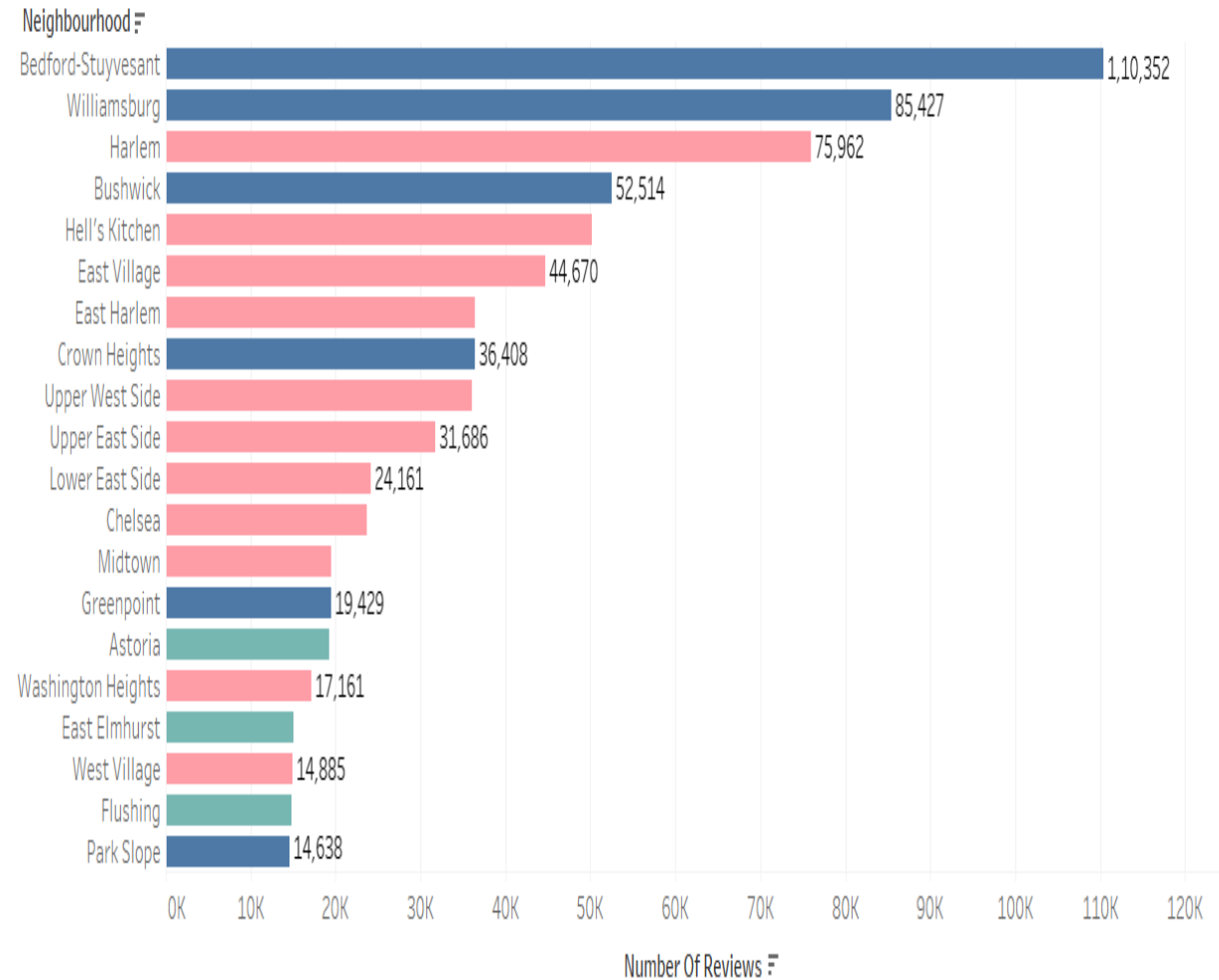
Price variation w.r.t Geography



Popular Neighborhoods

- Bedford-Stuyvesant in Brooklyn is the most popular neighborhood with 110,352 total reviews, followed by Williamsburg.
- In Manhattan, Harlem received the highest number of reviews, followed by Hell's Kitchen.
- The higher number of customer reviews suggests higher satisfaction levels in these areas.

Popular Neighbourhoods





Thank You