



PROPERTY MANAGEMENT OPTIMIZATION

USING TABLEAU



ABOUT COMPANY

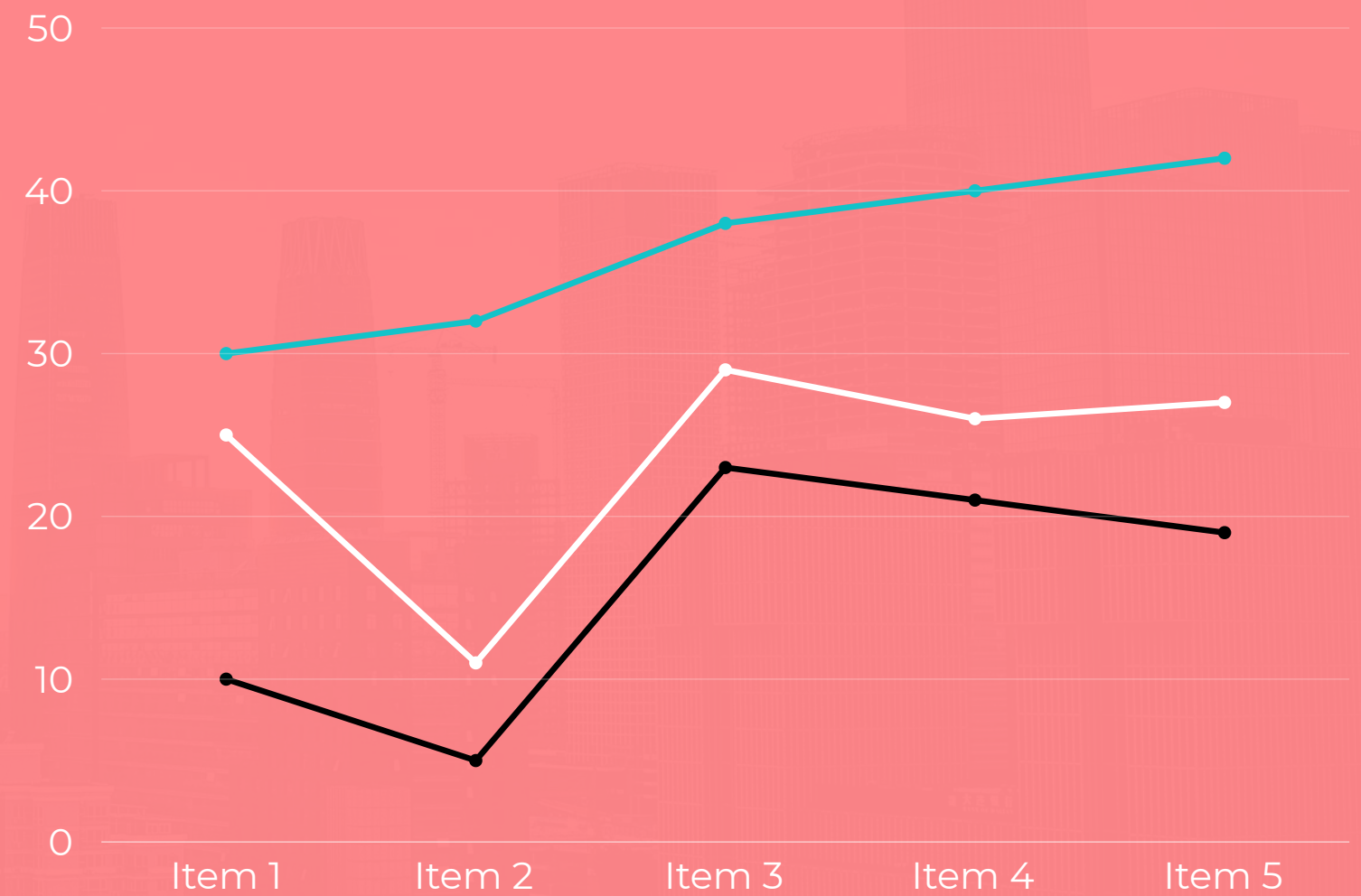
Airbnb is an online marketplace that connects people looking for accommodations with people who want to rent out their homes. It offers a variety of stays and experiences, including:

- Unique stays
- From cottages to penthouses, hosts share their places for work trips, weekend getaways, and more
- Experiences
- Local experts host experiences like horse whispering, canyon hiking, cooking, art, and music
- Adventures
- Local guides take small groups on immersive expeditions to explore new territories
- Airbnb for Work
- Offers places to work, collaborative spaces, team-building experiences, and administrative tools

PROJECT STATEMENT

You are working as a Data Analyst at **Airbnb**, and **Airbnb** aims to develop a Tableau dashboard to optimize rental strategies, enhance customer satisfaction, and maximize revenue for property owners. Your role is to analyze **Airbnb's** dataset and generate valuable insights that will help improve decision-making for both **Airbnb** and its hosts.

TABLEAU DASHBOARD



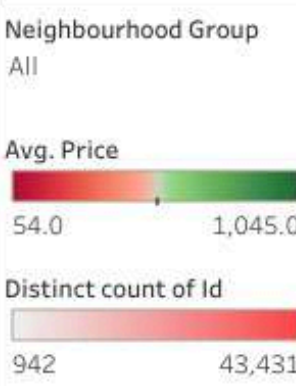
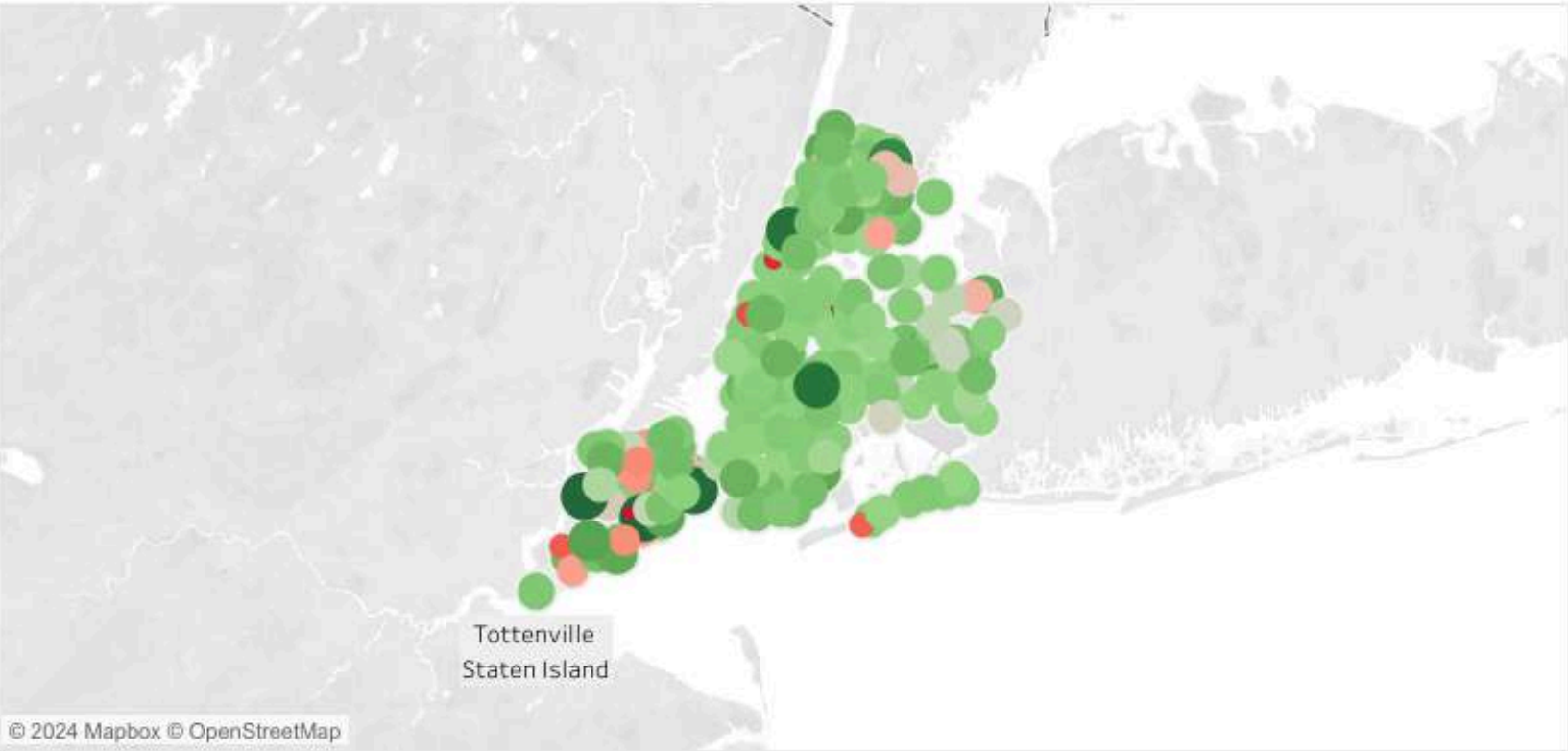
Airbnb Property Management Optimization



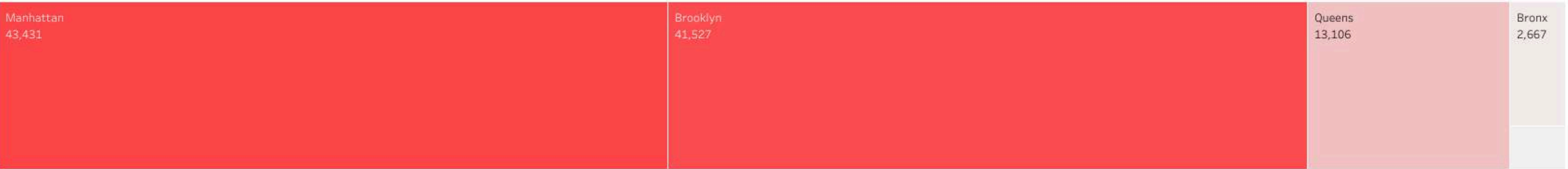
Neighbourhood Popularity



Pricing across different neighbourhoods



Total Hostings by Neighbourhood Group



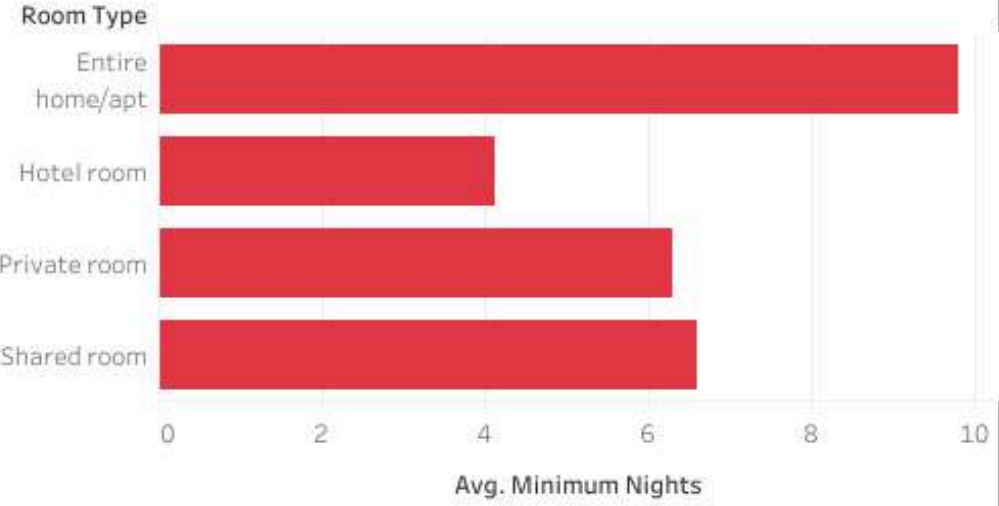
Airbnb Property Management Optimization



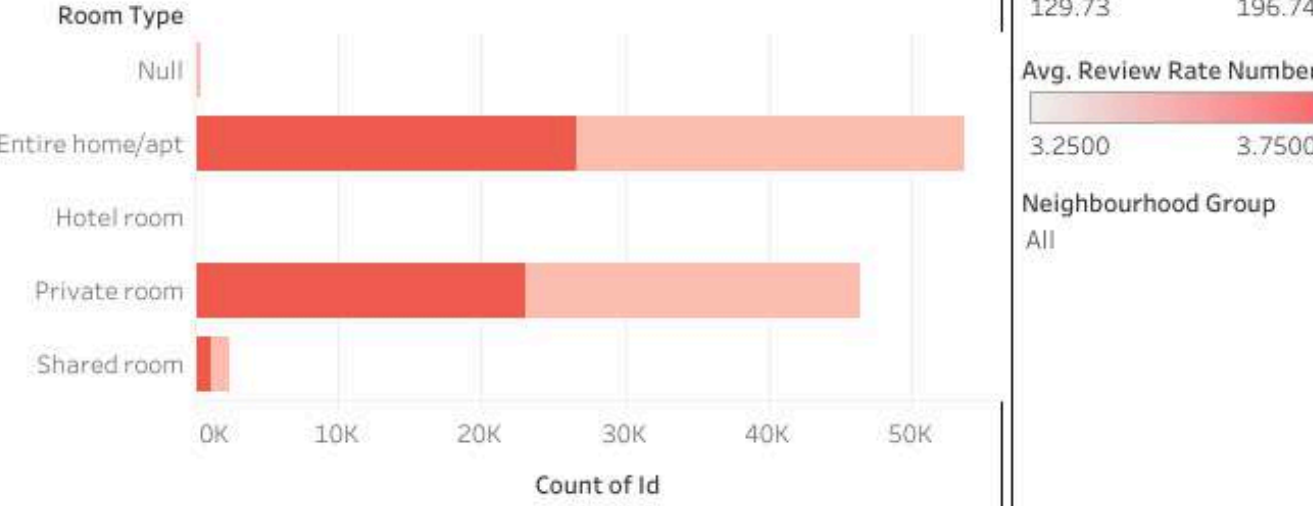
Availability of Rooms across Neighbourhood Groups



Minimum Night Stays across Property Type



Instantly Bookable or not by Property Type



Avg. Review Rate of Room Type for each Neighbourhood Group

Neighbourhood Group	Room Type			
	Entire home/apt	Hotel room	Private room	Shared room
Bronx	3.3545		3.3258	3.2650
Brooklyn	3.2500	3.7500	3.2651	3.3370
Manhattan	3.2757	3.5000	3.2768	3.2597
Queens	3.3520	3.7500	3.3126	3.3911
Staten Island	3.3262		3.4738	3.5333

Average Price by Property Type



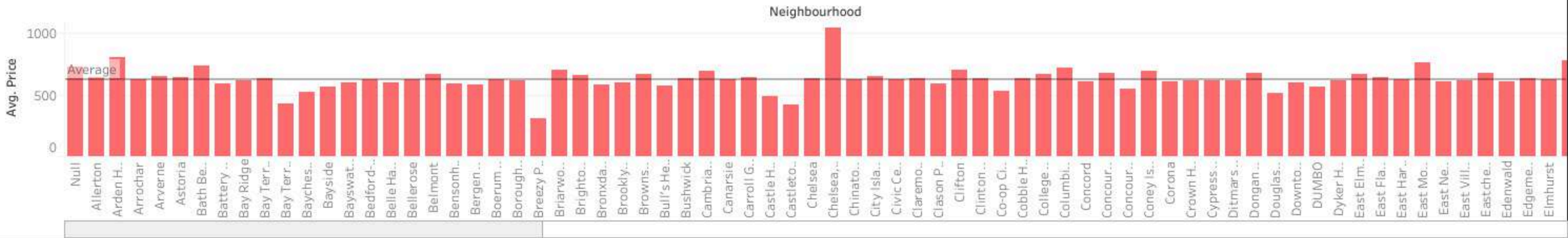
Demand Distribution of Property Type



Airbnb Property Management Optimization



Avg. Price Distribution across Neighbourhoods

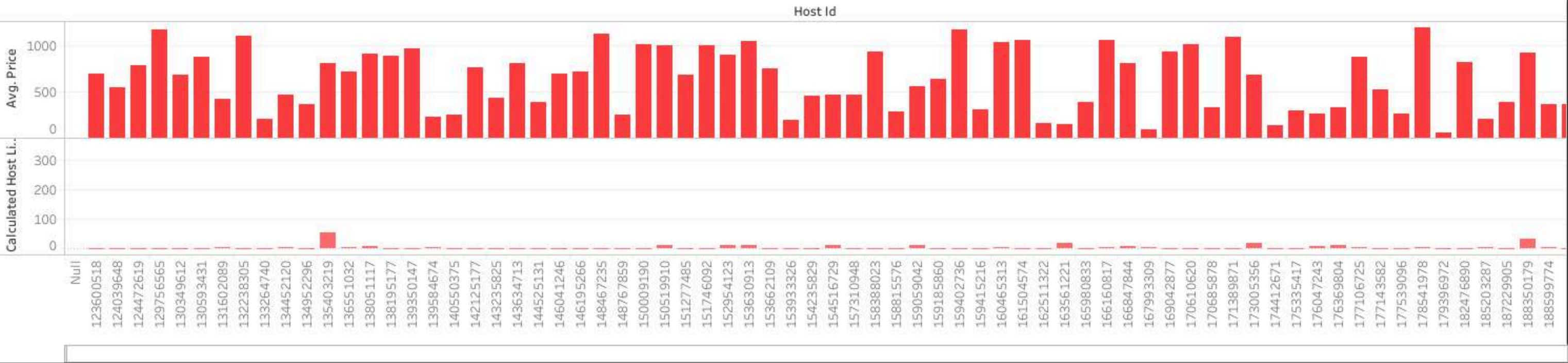


Relationship between Listing Prices & Customer Review Ratings

-0.004627

The correlation value between price and review rate per month is -0.004627, indicating a very weak relationship. This near-zero correlation suggests that the price has a negligible impact on the number of reviews per month.

Average Price of Host Listings



Correlation of calculated_host_listings vs listing_price

-0.00008811

The correlation between calculated_host_listings & price is negligible.

Airbnb Property Management Optimization



Construction Year Influence with Popularity & Price



Year of Date
All

Neighbourhood Group
All

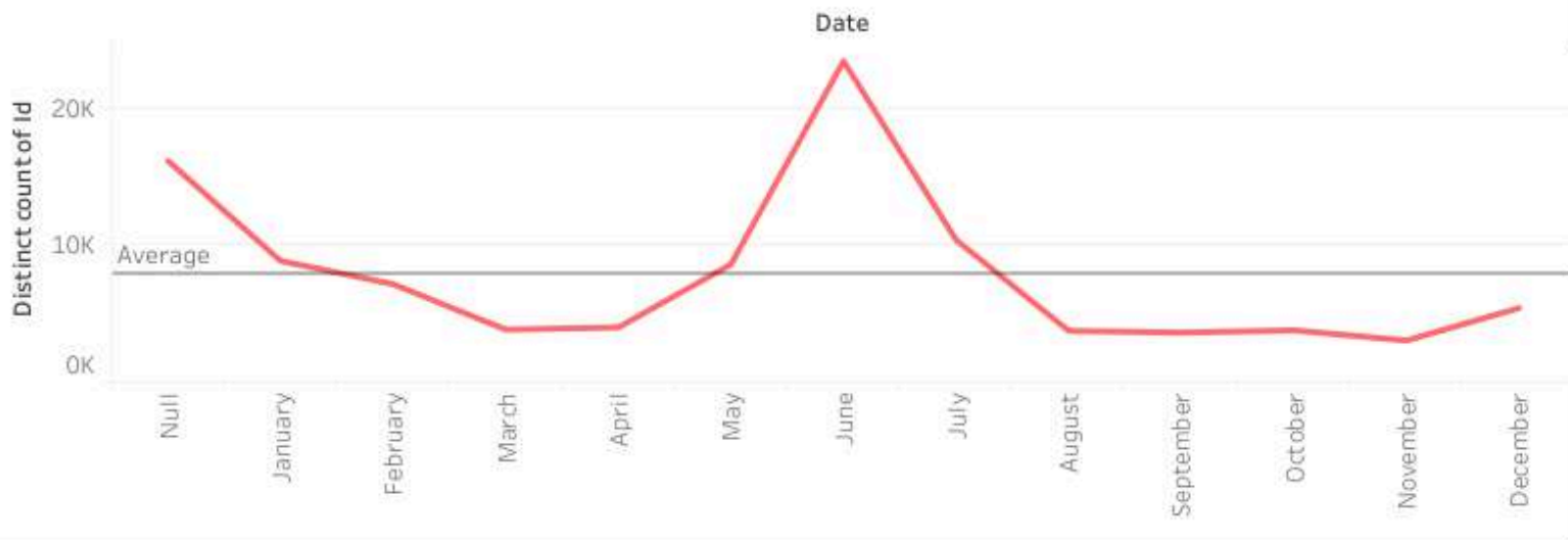
Correlation of
Construction Year vs
Price

-0.003619

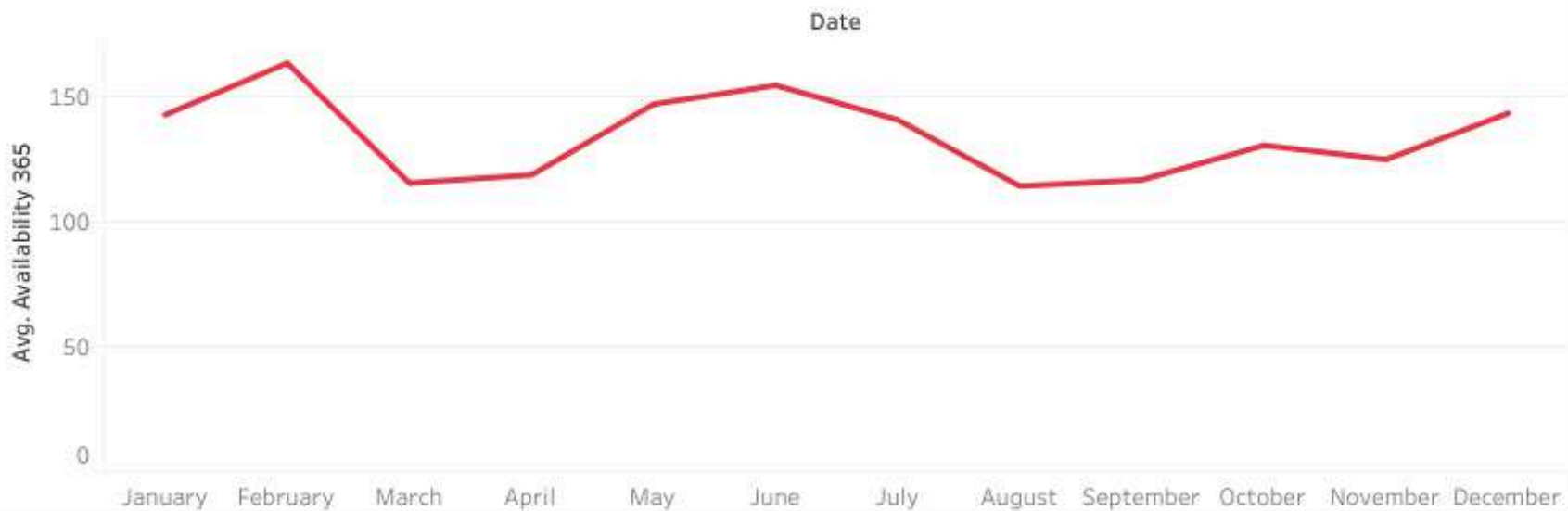
Correlation of
Construction Year vs
Popularity

0.001178

Seasonality and Booking Trends



Room Availability across the Year



We can see in the graph
(Construction Year Influence with
Popularity & price) as well as above
that there is negligible influence of
the Construction Year on both
Popularity as well as Price

KEY INSIGHTS

1. Neighbourhood Popularity & Total Hostings:

- Manhattan and Brooklyn lead in the total number of Airbnb listings, showing high property hosting density.
- Queens has a notable number of listings but less compared to Manhattan and Brooklyn.
- Bronx and Staten Island have the lowest number of total hostings, indicating less competition or potential lower demand.

2. Pricing Trends:

- The map highlighting average pricing suggests that certain areas in Manhattan have higher prices, while areas in Brooklyn and Queens show varied pricing.
- There's a wide range in pricing, from \$54 up to \$1,045, indicating diverse market segments catering to different guest budgets.

3. Room Availability:

- Staten Island has the highest average availability of rooms, followed by Bronx and Queens. Manhattan and Brooklyn have lower availability, likely due to higher booking rates and demand.

4. Minimum Night Stays:

- Entire homes/apartments typically have higher minimum night requirements, whereas shared rooms and private rooms offer more flexibility.
- Hotel rooms and shared rooms appear to have the most guest-friendly minimum night policies.

5. Instant Booking Trends:

- Entire homes/apartments and private rooms dominate the number of properties available for instant booking, suggesting convenience in booking these types.

6. Review Ratings by Room Type:

- Hotel rooms in Brooklyn and Queens have the highest average review ratings.
- Other room types across boroughs generally range between 3.25 to 3.75, indicating consistency in guest satisfaction.

7. Average Pricing by Property Type:

- Hotel rooms are on the higher end of average pricing, followed by private rooms and entire homes/apartments, suggesting premium charges for certain conveniences.

8. Demand Distribution by Property Type:

- Entire homes/apartments and private rooms have the highest demand, which aligns with the preference for more privacy or complete accommodations.

KEY INSIGHTS

9. Average Price Distribution across Neighborhoods

- There is a considerable variation in average listing prices across different neighborhoods. Some areas have higher average prices, which could reflect neighborhood desirability or the type of accommodations available.
- Neighborhoods like Chelsea have notably higher average prices compared to others.

10. Relationship between Listing Prices and Customer Review Ratings

- The correlation between listing prices and customer review ratings is very close to zero (-0.004627), indicating an extremely weak relationship. This suggests that price has minimal impact on how often customers leave reviews or their ratings.

11. Average Price of Host Listings

- The distribution of average listing prices per host varies, with some hosts having higher prices, likely indicating more premium or larger listings.
- Hosts with a large number of listings do not necessarily charge the highest prices, as indicated by the spread across the chart.

12. Correlation between Number of Listings per Host and Listing Price

- The correlation between the number of listings a host has and the price is also very close to zero (-0.00008811), indicating no meaningful relationship between these two variables.

13. Construction Year Influence on Popularity and Price

- The graphs show a negligible influence of the construction year on both the popularity of listings and their prices. The correlation values (-0.003619 for price and 0.001178 for popularity) are close to zero, suggesting the age of the property does not significantly impact these metrics.

14. Seasonality and Booking Trends

- Booking demand shows seasonality, with a peak in June, suggesting that this is a popular month for bookings. There is a noticeable drop from July onwards, with a consistent decline into the winter months.

15. Room Availability across the Year

- Room availability appears to vary by month, with higher availability in certain months. This trend can be valuable for identifying off-peak periods and planning promotional strategies to improve occupancy.

RECOMMENDATIONS FOR PROPERTY MANAGEMENT:

- Target High-Demand Areas: Focus on Manhattan and Brooklyn for higher returns due to their popularity and demand.
- Competitive Pricing: Review local pricing strategies to stay competitive, especially in premium neighborhoods.
- Flexible Booking Options: Providing instant booking and varied minimum night stays could attract more guests.
- Diverse Property Offerings: To maximize income, offer a mix of property types (e.g., private rooms and entire homes).

