



# Data Analysis Portfolio



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# Project Description

This project aims to leverage the rich data available in the NYC Open Data set (2019) to uncover valuable insights for both Airbnb hosts and guests. Through data analysis, we will explore factors influencing listing success in the competitive NYC market.







# Key Questions

1

What is the average price of Airbnb listings in each neighbourhood and how does it vary by room type?

2

Which neighborhoods have the highest and lowest average prices for Airbnb listings?

3

How many listings are there per room type, and how does the price and availability vary by room type?

1

**What is the average price of Airbnb listings in each neighbourhood and how does it vary by room type?**

# Findings & Insights



# Summary of Key Findings

## Neighborhood Pricing:

Manhattan boasts the highest average listing price at around \$200 per night, followed by Brooklyn at \$175. Queens, Staten Island, and the Bronx have significantly lower averages, all below \$150.

## Room Type Dynamics:

Private rooms have a higher total price despite potentially lower nightly rates. This suggests lower year-round availability compared to other room types.

## Overall Insights:

Location significantly impacts pricing, with Manhattan commanding a premium.

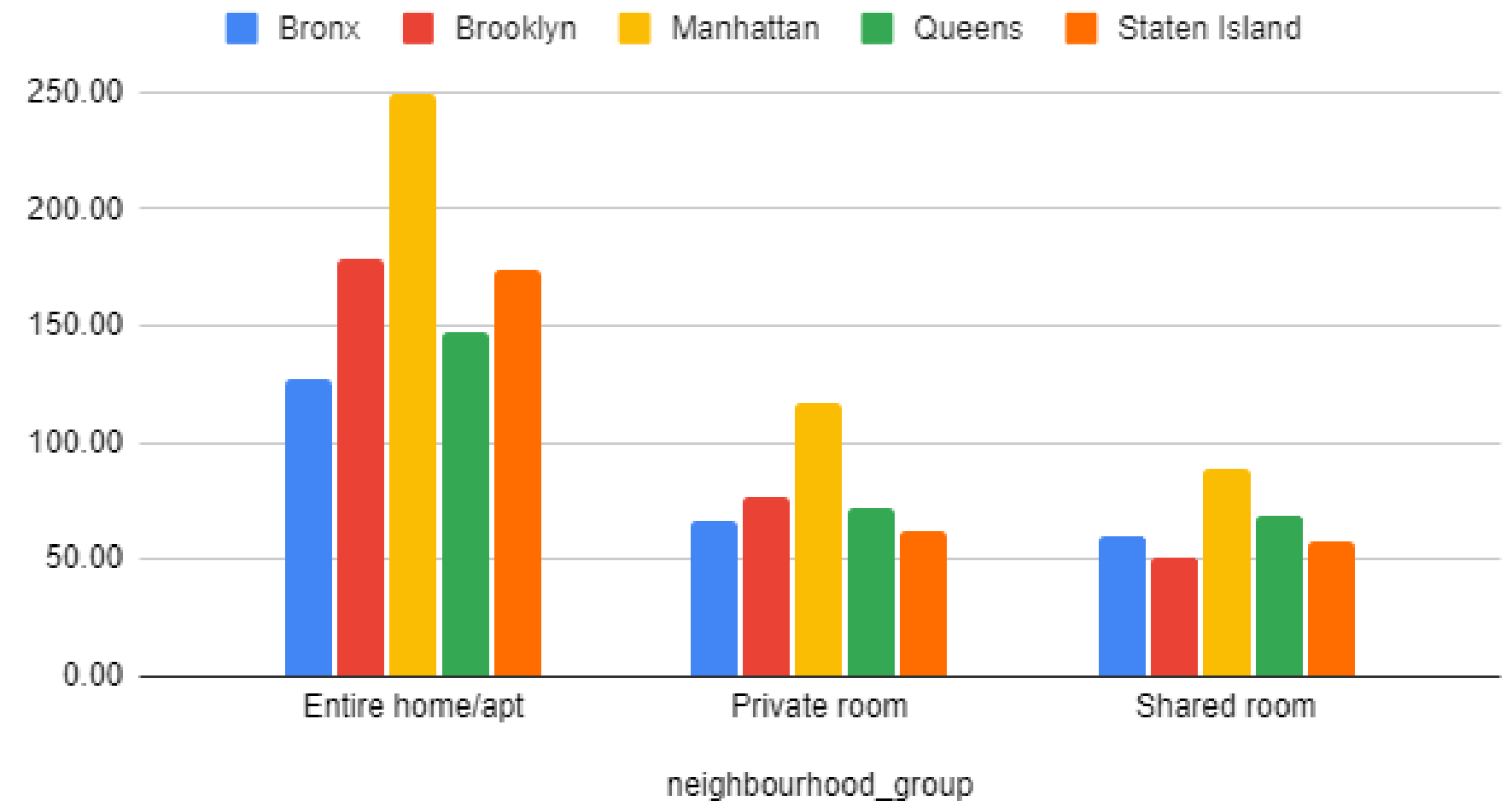
Price distribution within neighborhoods suggests additional factors like amenities or unique listings influence pricing.



# What is the average price of Airbnb listings in each neighbourhood and how does it vary by room type?

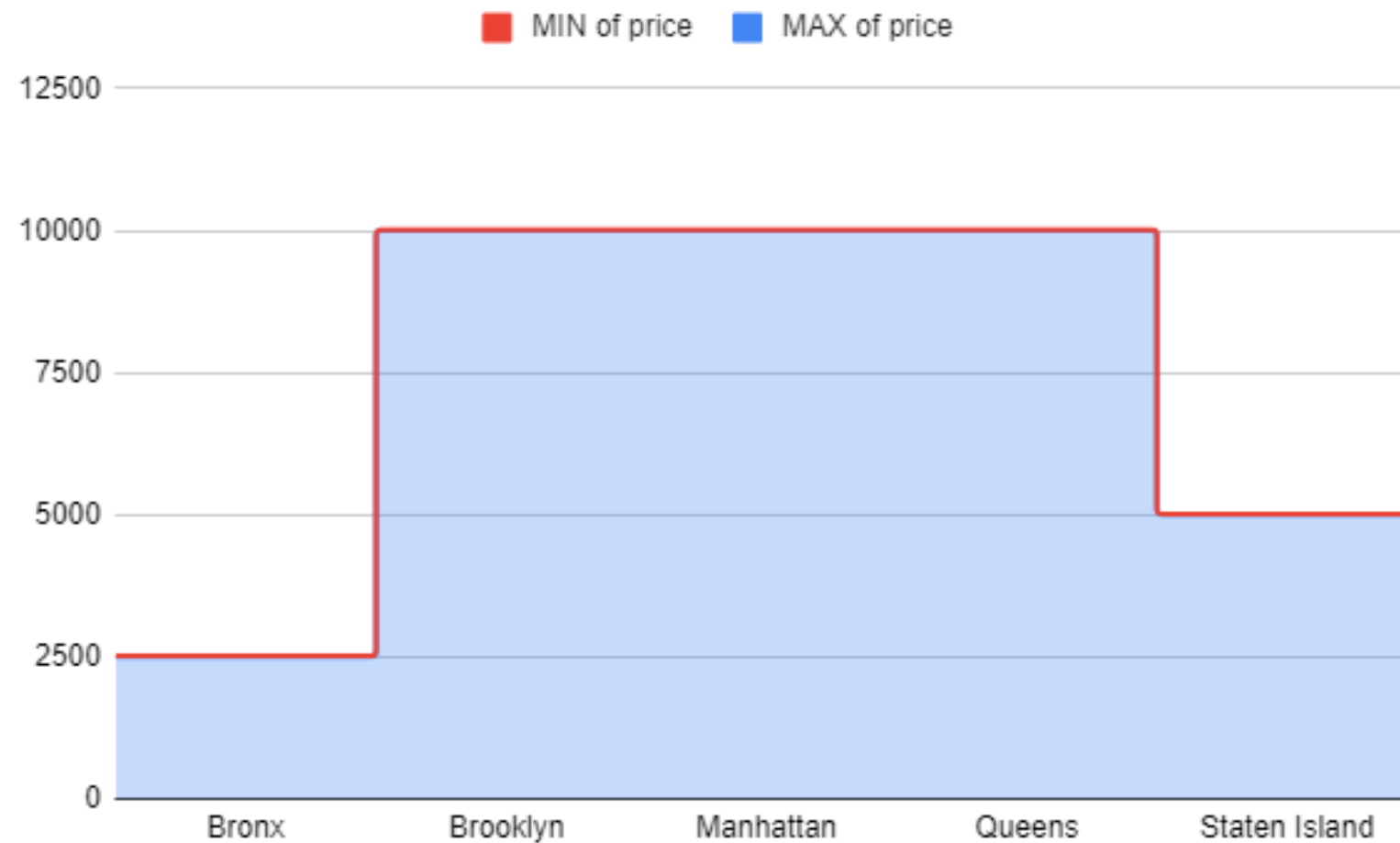
- The most expensive neighborhood group for Airbnb listings is Manhattan, with an average price of approximately \$200 per night.
- Brooklyn follows closely behind Manhattan at around \$175 per night.
- Queens, Staten Island, and the Bronx all have significantly lower average listing prices, all falling below \$150 per night.

Bronx, Brooklyn, Manhattan, Queens and Staten Island

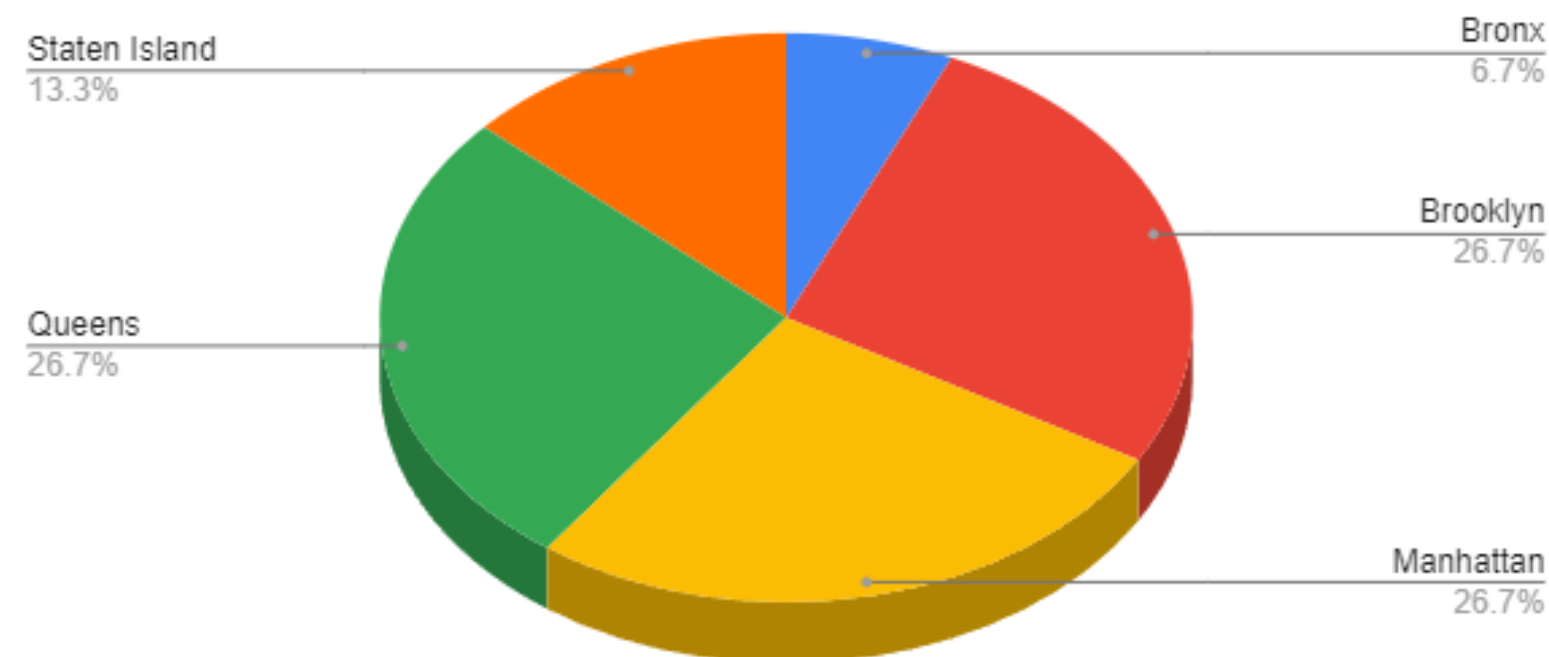




## Which neighborhoods have the highest and lowest average prices for Airbnb listings?

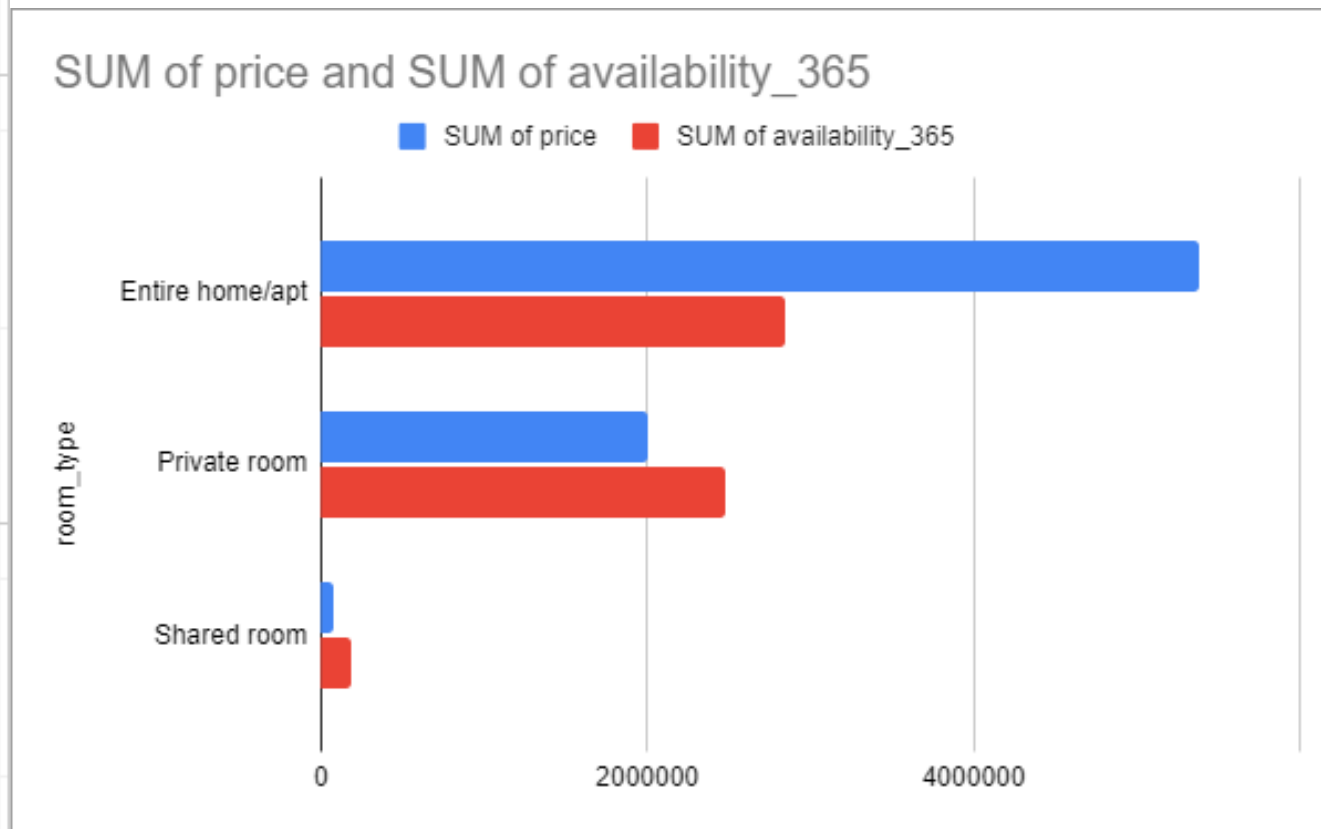
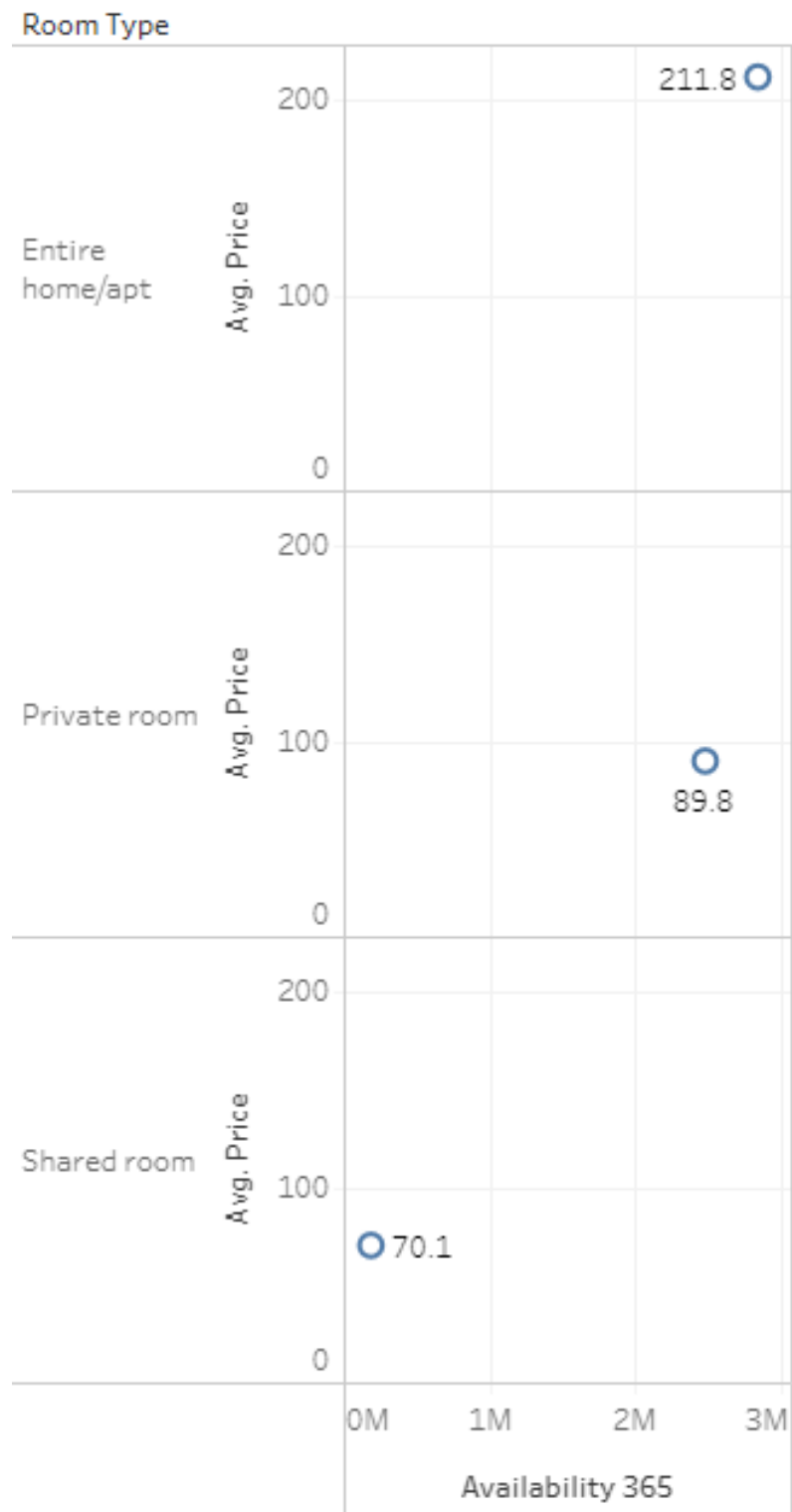


MAX of price and MIN of price



- The graph reveals that the spread between the minimum and maximum price varies significantly across different neighborhoods. Some neighborhoods, like NoLI, have a relatively small gap between the two, suggesting a more consistent price range for Airbnb listings. In contrast, areas like Soho and Williamsburg show a much larger spread, indicating a wider range of listing prices, potentially including luxury or unique rentals alongside more affordable options.
- There isn't a single neighborhood consistently topping or bottoming out in terms of price range. This suggests that price distribution might be more complex and influenced by various factors beyond just location.





## How many listings are there per room type, and how does the price and availability vary by room type?

- The graph indicates that private rooms have a considerably higher total price (sum of price) compared to entire homes/apartments and shared rooms. This suggests that while individual nightly rates might be lower for private rooms, the overall availability throughout the year (reflected in "SUM of availability\_365") is likely lower, leading to a higher total price for the lessor.
- Shared rooms have the highest total availability across the year. This implies that shared rooms are either more frequently available for booking throughout the year or are rented for shorter durations compared to other room types.

# Recommendations & Conclusion



# Recommended Actions

## **Targeting the Right Audience with Strategic Pricing (For Hosts):**

Research typical prices in your area for room type. Highlight unique features to justify a premium price, or offer discounts to be competitive.

## **Optimizing Availability Based on Room Type and Guest Preferences (For Hosts):**

If you list a private room, consider flexible stays to boost bookings. For shared rooms, see if shorter or longer rentals are more popular and adjust the listing.

## **Selecting the Ideal Room Type Based on Budget and Privacy Needs (For Guests):**

Pick the room type based on budget and privacy needs. Shared rooms are budget-friendly, private rooms offer a balance, and entire homes/apartments provide the most privacy but can be pricier.





# Conclusion

Our exploration of NYC Airbnb rentals revealed location's impact on pricing, with Manhattan leading the pack. Additionally, factors beyond location, like amenities, influence pricing strategies. We also saw a trade-off between price and availability for room types. Hosts can leverage this knowledge to optimize income through targeted pricing and availability based on room type. Guests can choose the ideal room type based on budget and privacy needs. This analysis paves the way for further exploration of seasonal trends, amenity influences, and guest demographics to create an even more successful NYC Airbnb experience for everyone.





# Thank you!

