



Data Analysis Portfolio

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Professional Background:

I am a chartered Accountant and a Chatered Tax Practitioner and recently trained Data Analyst from Entrylevel.

I worked in the Bank for one year in the customer service desk where I helped customers with new Account opening, taking customers compliants and helping to resolve them, and also writing of Bank Draft. From there, I moved to an Accounting Firm as an Audit staff and my responsibilities includes preparation of Accounts for clients, Auditing of Accounts and producing Audit report. I also worked in the Taxation unit and my work was to compute Tax liability for clients and file Tax returns on clients behave.

I am hardworking, a good team player and passionate about my work. Beyond my professional work, I have been actively pursuing my passion for data analytics. I am committed to continuous learning and staying updated on industry trends.



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Project Description:

- *To better understand the pricing and popularity of Airbnb listing in Various Neighborhoods in new York city and identifying trends and patterns*
- *This will help us to:*
 - *Identify which neighborhood needs more campaign for Airbnb listing*
 - *Create targeted Marketing strategies to increase the company revenue in New York city*



Methodology

- The Airbnb Dataset for this analysis was sourced from Kaggle, a platform hosting public databases.
- The dataset underwent a thorough cleaning process. This involved the removal of missing or irrelevant values.
- The cleaned data was then subjected to statistical analysis using excel and tableau. These tools were instrumental in uncovering patterns, trends and correlations within the data.



Key questions:

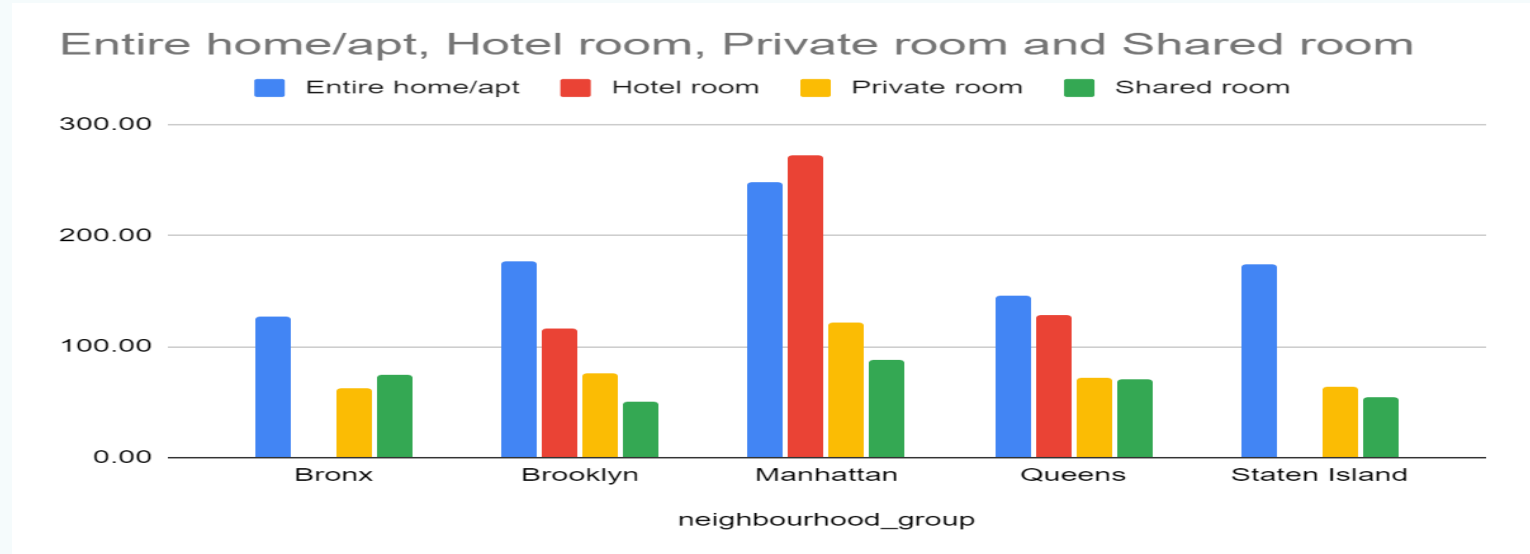
- What is the average price of Airbnb listings in each neighborhood and how does it vary by room type?
- Which neighborhoods have the highest and lowest average prices for Airbnb listings?
- How many listings are there per room type, and how does the price and availability vary by room type?
- What is the impact of reviews on the price and popularity of Airbnb listings?
- Which neighborhoods Group have the highest and lowest neighborhoods in New York city?



Findings & Insights



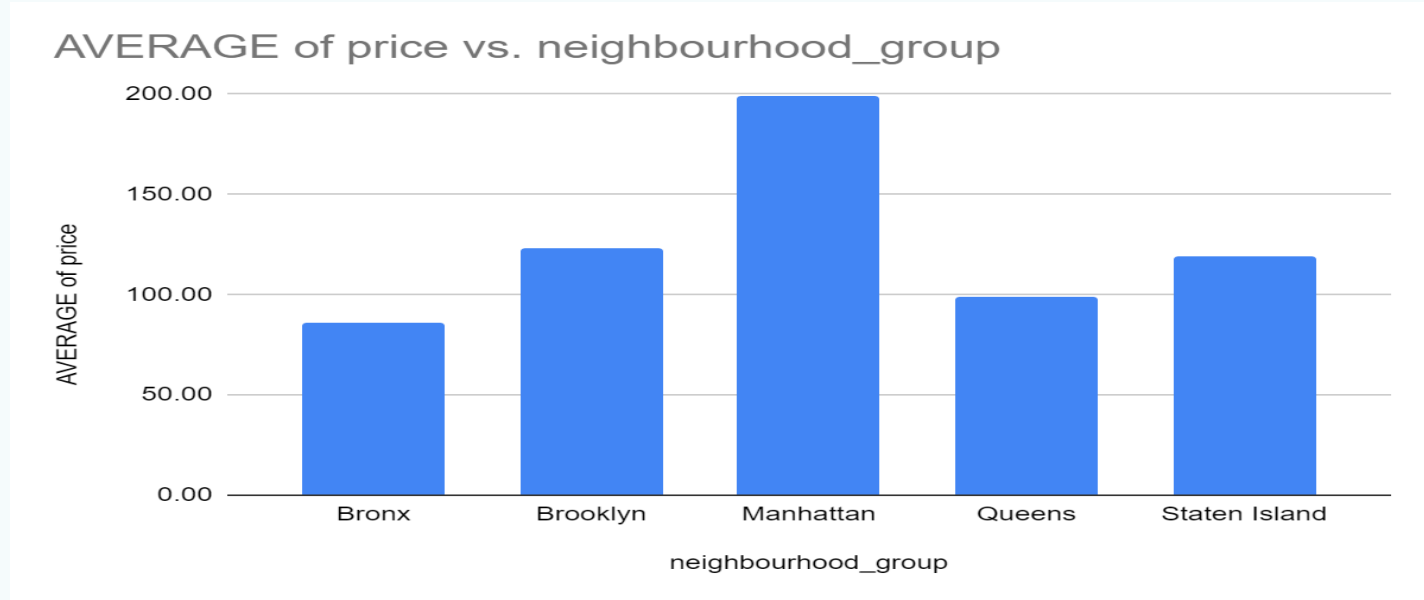
1. What is the average price of Airbnb listings in each neighborhood group and how does it vary by room type?



The average price of Entire Home/apt is higher in all the neighborhoods compared to other room types except for Manhattan where the price of hotel room listing is higher than entire room/apt. This indicates that the type of room and the location of the listing affect the pricing of Airbnb listing by the Host.



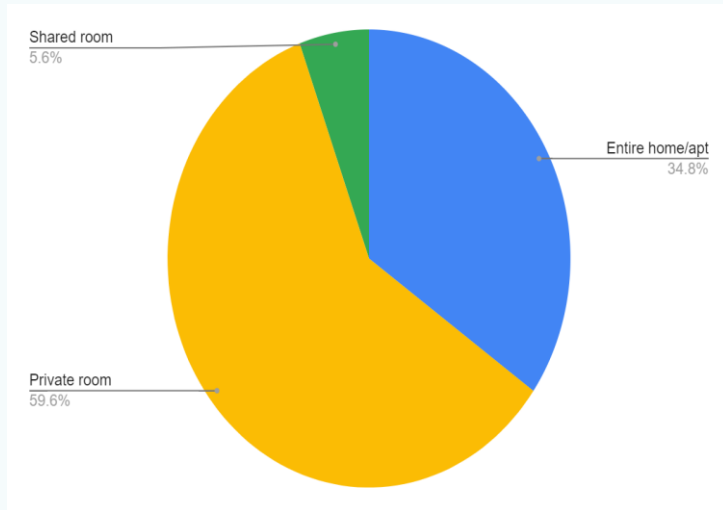
2. Which neighborhoods have the highest and lowest average prices for Airbnb listings?



Manhattan has the highest average price of Airbnb Listing while bronx has the lowest price of airbnb listing in new york city. This suggest that locations is a key factor in pricing strategy for airbnb host.



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



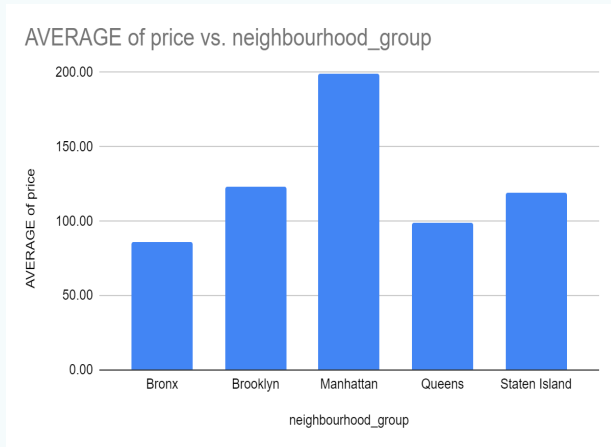
Entire home/apt, Hotel room, Private room and Shared room



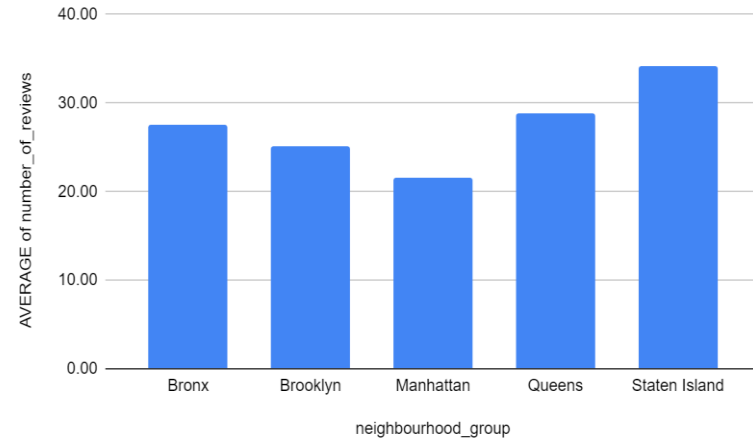
Private rooms has the highest number of listing while Hotel rooms has the lowest number of listing. Hotel rooms are more available than the other type of rooms and the average price is lower than the price of an entire house/apt. This shows the type of rooms customers are willing to pay for in different neighborhoods.



4. What is the impact of reviews on the price and popularity of Airbnb listings?

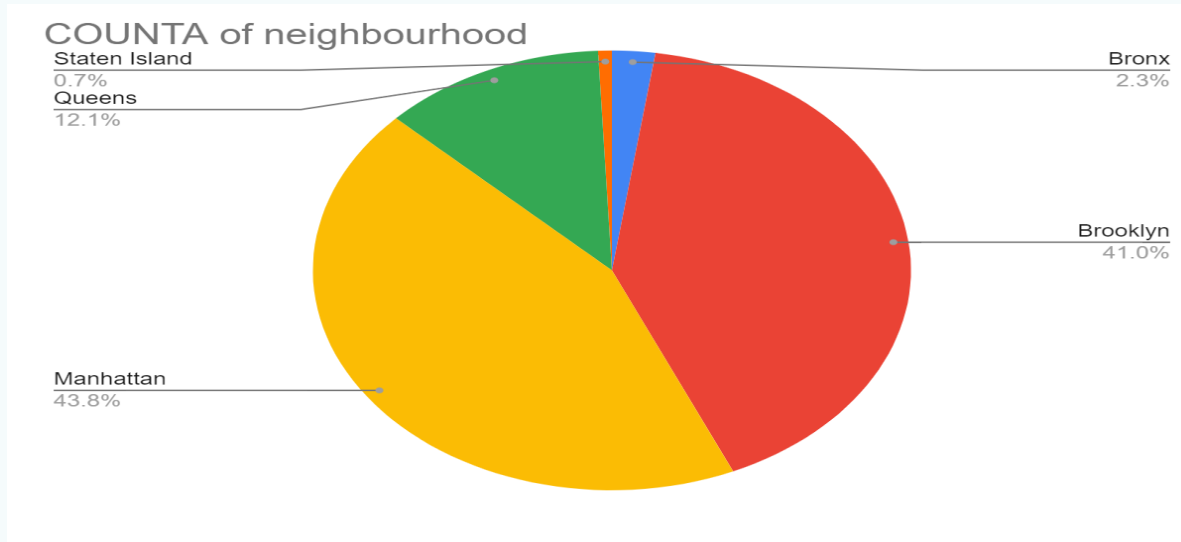


AVERAGE of number_of_reviews vs. neighbourhood_group



The number of reviews has no impact on the price and popularity of Airbnb listing. Manhattan with the list number of reviews has the highest price of Airbnb listing in new York city.

5. Which neighborhoods Group have the highest and lowest neighborhoods in New York city?



Manhattan has the largest number neighborhoods while Staten island has the lowest number of neighborhoods in new York city. This shows the demographic size of the different neighborhood groups of new York city and how they can cater for different market needs of Airbnb guest.



Summary of findings:

- **Neighborhood Group average prices of Airbnb Listing:**

- *Manhattan with the highest average price of Airbnb listing in New York city reflect its status as an exclusive destination. It also account for almost 44% neighborhood in new York city showing a considerable number of listing concentration in the city . While Brooklyn occupying 41% of the neighborhoods in new York city has an average price that is 38% lesser than that of Manhattan . This shows that Brooklyn offers more affordable options while maintaining a strong presence in the market. Queens with more than 12% neighborhood listings, offers prices that are approximately half of Manhattan average . This positions queens as a more budget-friendly option for travelers Potentially attracting a different segment of the market. This indicates that location is a pivotal factor in pricing of Airbnb listings with each neighborhood group catering for different prices.*

- **Room types and Neighborhood**

- *Manhattan is the neighborhood with highest number of Entire home/apt listing room type, underscoring its popularity among Airbnb host, and the highest average price of these listing in new York city. Reflecting its exclusive market positioning. While Brooklyn despite having approximately 27% fewer entire home/apt listing compared to Manhattan, Brooklyn holds the second highest average price point. It surpasses Staten island by about 4% even though Staten island has the fewest listings in this category.*
- *Manhattan leads with highest number of listing in Hotel rooms , private rooms and shared rooms. This high volume of listing indicate Manhattan's strong demand and market presence in Airbnb ecosystem. while Staten island has the lowest number of listings for these room types. This may indicate its more residential nature and lower demand for short-term rentals.*
- *Despite the neighborhood size of Manhattan and Brooklyn being nearly equal (43.8 % vs 41%) . The number of Airbnb listing in Manhattan is over 6% higher than Brooklyn's. Therefore Manhattan price is 38% more than Brooklyn price . The significant price difference indicates Manhattan exclusive market position compared to the more affordable options available in Brooklyn. This indicate the influence of location on the density and pricing of Airbnb in New York city.*

- **number of Review versus price :**

- *Manhattan has the highest average price of Airbnb listing with the lowest number of reviews. While Staten island with highest number of reviews has the third lowest average price. This indicates that the guest review has no direct correlation with the pricing of Airbnb.*



Recommended actions:

Product recommendations:

- *Focus on getting more listing in Brooklyn.* Airbnb could position this neighborhood as a value destination, attracting budget-conscious travelers who may find Manhattan's prices prohibitive. *And for queens neighborhood group a tailor marketing efforts to highlight the distinct characteristics of this neighborhood, because these neighborhoods show potentials for growth.*
- *For room types and Neighborhood,* Airbnb could encourage hosts in Manhattan to offer a range of options, from luxury accommodations to more budget-friendly spaces, to attract a wider array of guests. Encourage more hosts in Brooklyn to list their properties as 'Entire home/apt' to capitalize on the high average price point and close the gap with Manhattan.
- *For room types and neighborhood,* Airbnb should Develop localized experience packages that could increase the average spend per guest by 10%. These packages would bundle accommodations with tours or activities unique to each neighborhood. Implement dynamic pricing strategies in Manhattan that could increase prices by up to 20% during peak tourist seasons or major events, optimizing revenue for hosts

Marketing recommendations:

- Given the data insights, it is evident that Airbnb enjoys high popularity and a willingness among customers to pay premium prices for accommodations in Manhattan. To capitalize on this, the marketing recommendations proposed are,
- Airbnb can capitalize on Manhattan's exclusive market positioning by encouraging hosts to offer premium services and amenities.
- Enhance Brand Visibility in Other neighborhood. invest in marketing campaigns that showcase Brooklyn, Queens, Bronx, and Staten Island diverse neighborhoods and cultural attractions. This is to attract guests by highlighting local experiences, value for money, and the variety of listings available outside of Manhattan.
- Utilize a mix of digital and traditional marketing channels to reach potential guests.
- Use the high volume of positive reviews from areas like Staten Island in marketing materials to attract guests looking for highly-rated yet affordable options.



Conclusion

- After a comprehensive analysis of historical Airbnb data, including listing counts, pricing trends, and room type availability across New York City's neighborhoods, it is evident that Airbnb's popularity is concentrated in certain areas, with room for growth in others. Actionable recommendations have been outlined to boost Airbnb's visibility among potential hosts and guests throughout the city.
- By implementing targeted marketing strategies and continuously monitoring market dynamics, Airbnb can effectively increase its popularity and success within the competitive New York City hospitality market. The adoption of these data-driven strategies is expected to enhance Airbnb's market share and customer satisfaction, contributing to the company's overall growth and profitability



Thank you!