

IIIT-B AND UPGRAD

AIRBNB CASE STUDY

Members:

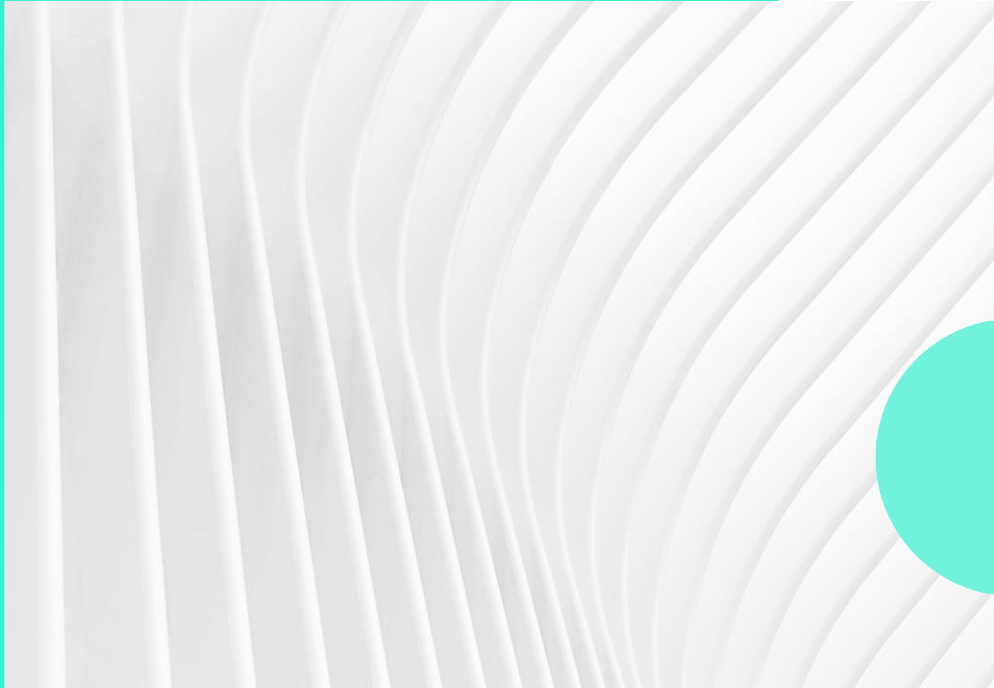
Mitej Jadhav

Shoeb Memon

Akash R



INTRO



As a data analyst at Airbnb, the recent decline in revenue has prompted the company to prepare for a rebound in travel as restrictions are lifted. With the aim of capitalizing on this changing landscape, data analysis will play a critical role in identifying trends, understanding customer behavior, and implementing targeted marketing strategies to ensure Airbnb's successful recovery and growth in the post-pandemic era.



OBJECTIVES

THE OFFICIALS AT AIRBNB ARE PRIMARILY INTERESTED IN GAINING INSIGHTFUL INFORMATION FROM THE DATASET BY EXAMINING VARIOUS ASPECTS. THEY WILL BE ABLE TO MAKE WISE DECISIONS AND PUT INTO PRACTICE TACTICS THAT CAN INCREASE THE COMPANY'S REVENUE THANKS TO THESE INSIGHTS.

PROBLEM STATEMENT



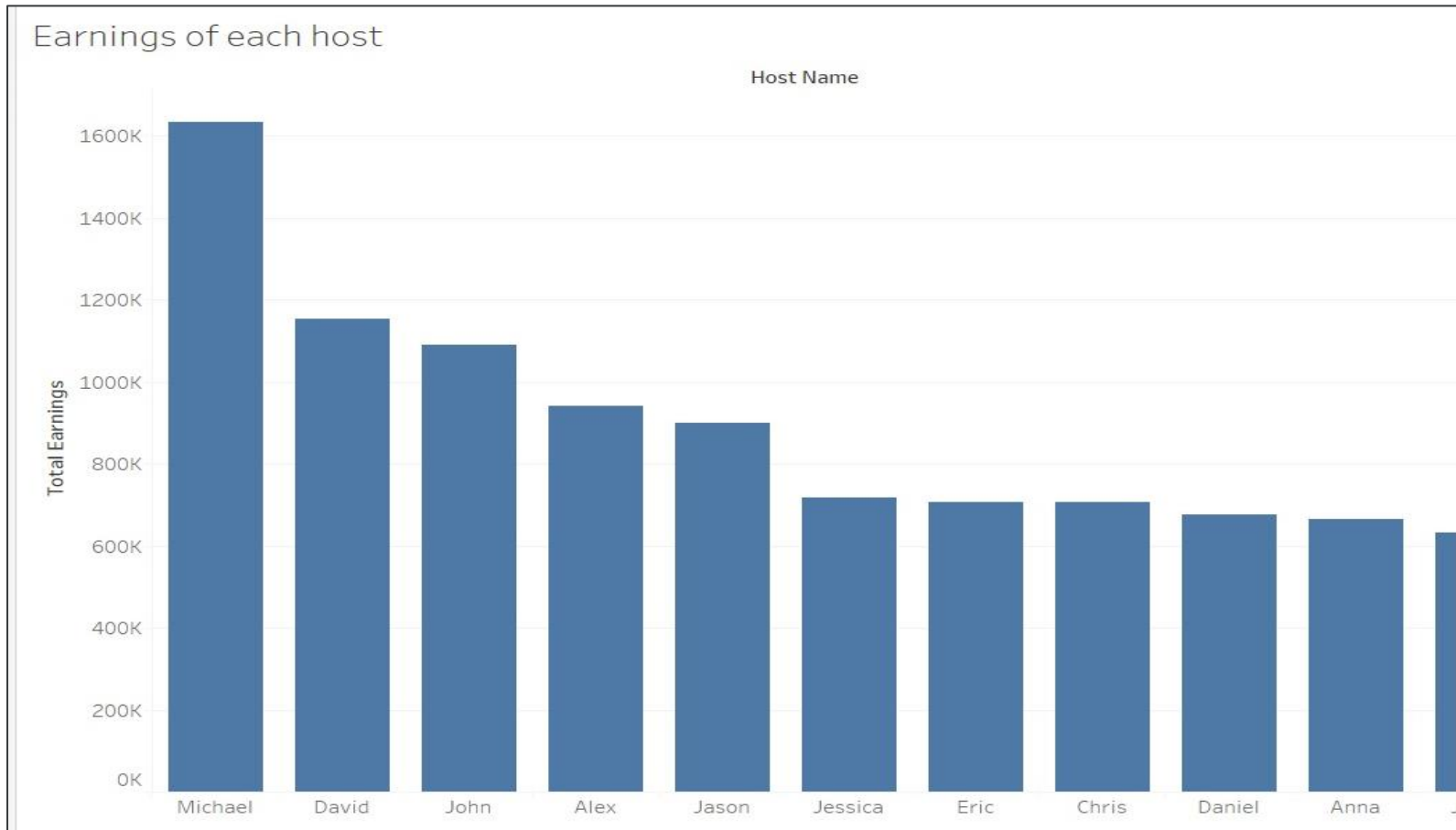
1. Which type of hosts to acquire more and where?
2. The categorization of customers based on their preferences.
3. What are the neighborhoods they need to target?
4. What is the pricing ranges preferred by customers?
5. The various kinds of properties that exist w.r.t. customer preferences.
6. Adjustments in the existing properties to make it more customer-oriented.
7. What are the most popular localities and properties in New York currently?
8. How to get unpopular properties more traction? and so on...

DATA PREPARATION

1. First, we analyzed the data in the dataset using Python to gain a better understanding of its contents.
2. We then dealt with missing values by using the median as a replacement. To ensure fairness, we identified an equal number of null values.
3. Next, we separated the dataset's columns into two types: categorical (representing qualitative data) and numerical (representing quantitative data).
4. Finally, we checked for any outliers in the six continuous columns (columns with continuous numerical data) and took necessary actions to handle them appropriately, ensuring that they did not adversely affect our analysis.

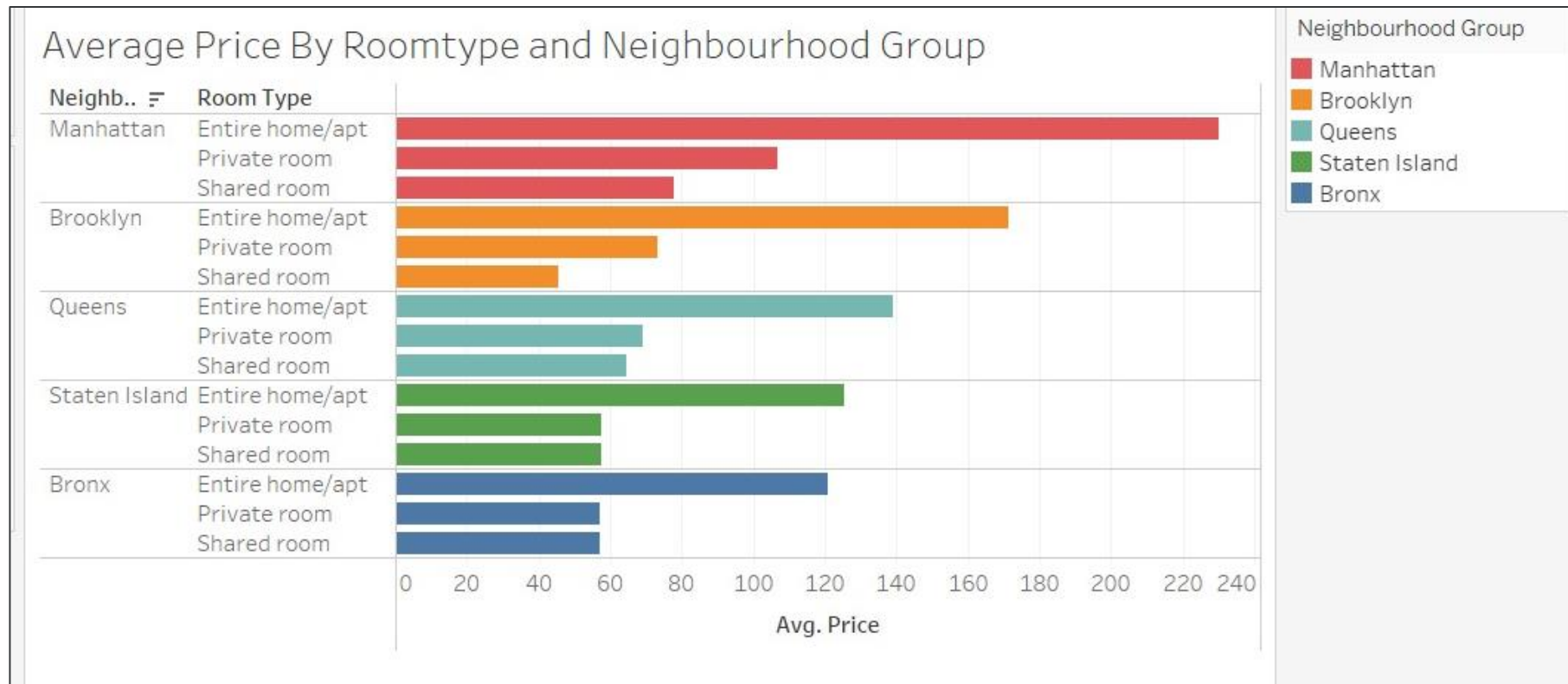
TOP 10 HOSTS WITH MAXIMUM NUMBER OF EARNINGS

1. The graphs shows the top 10 hosts which are earning maximum money
2. Michael, David and John are top 3 earners who are earning more and most of their properties are in Manhattan



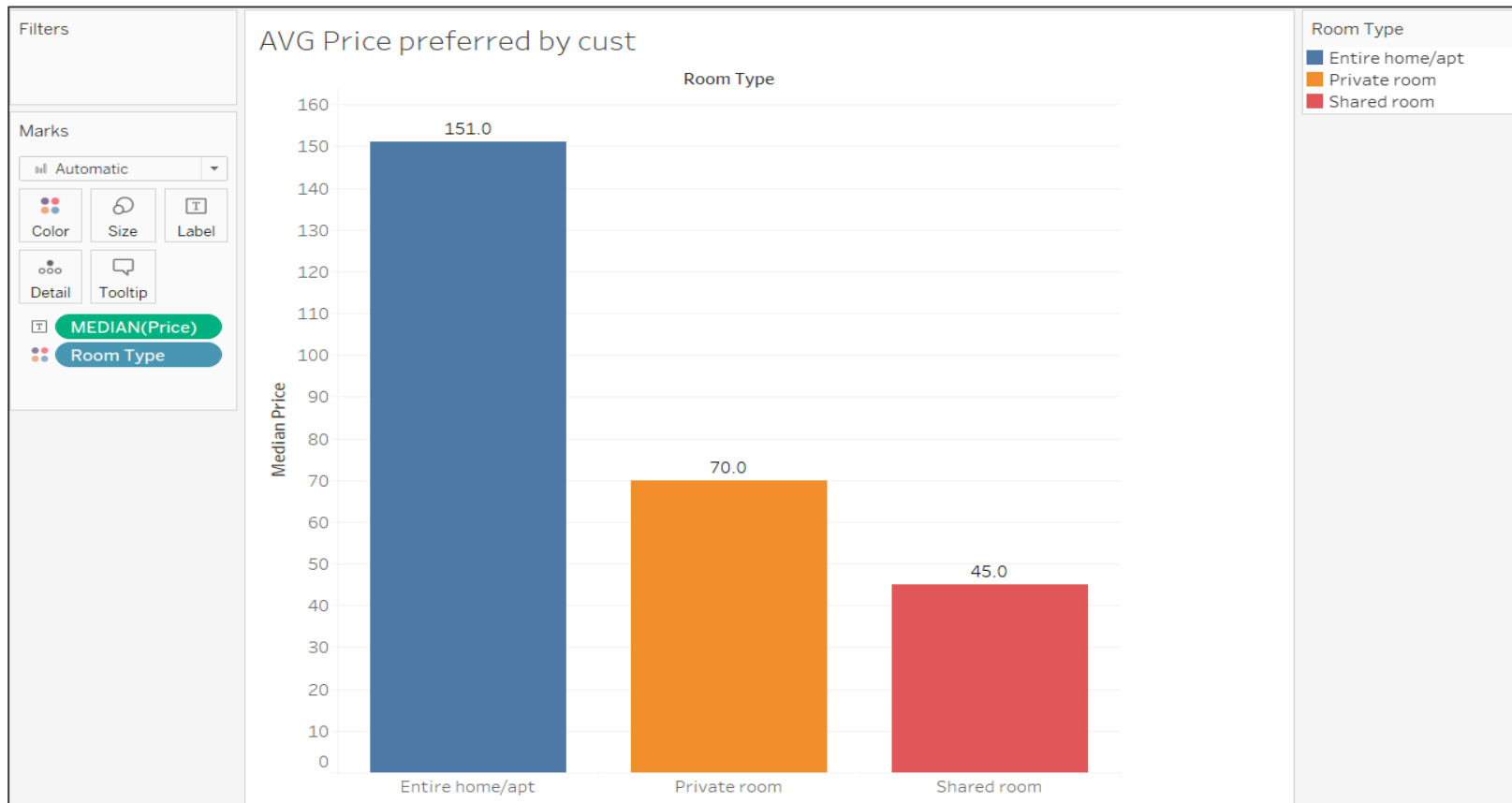
AVERAGE PRICE AT VARIOUS NEIGHBORHOOD GROUPS

1. The graphs shows **Manhattan** has the most Avg price for all 3 categories of Room Type, For entire home - 235\$, for Private room - 110\$, For shared Rooms - 78\$
2. At all Neighborhood Groups Shared room has the lowest Avg price.



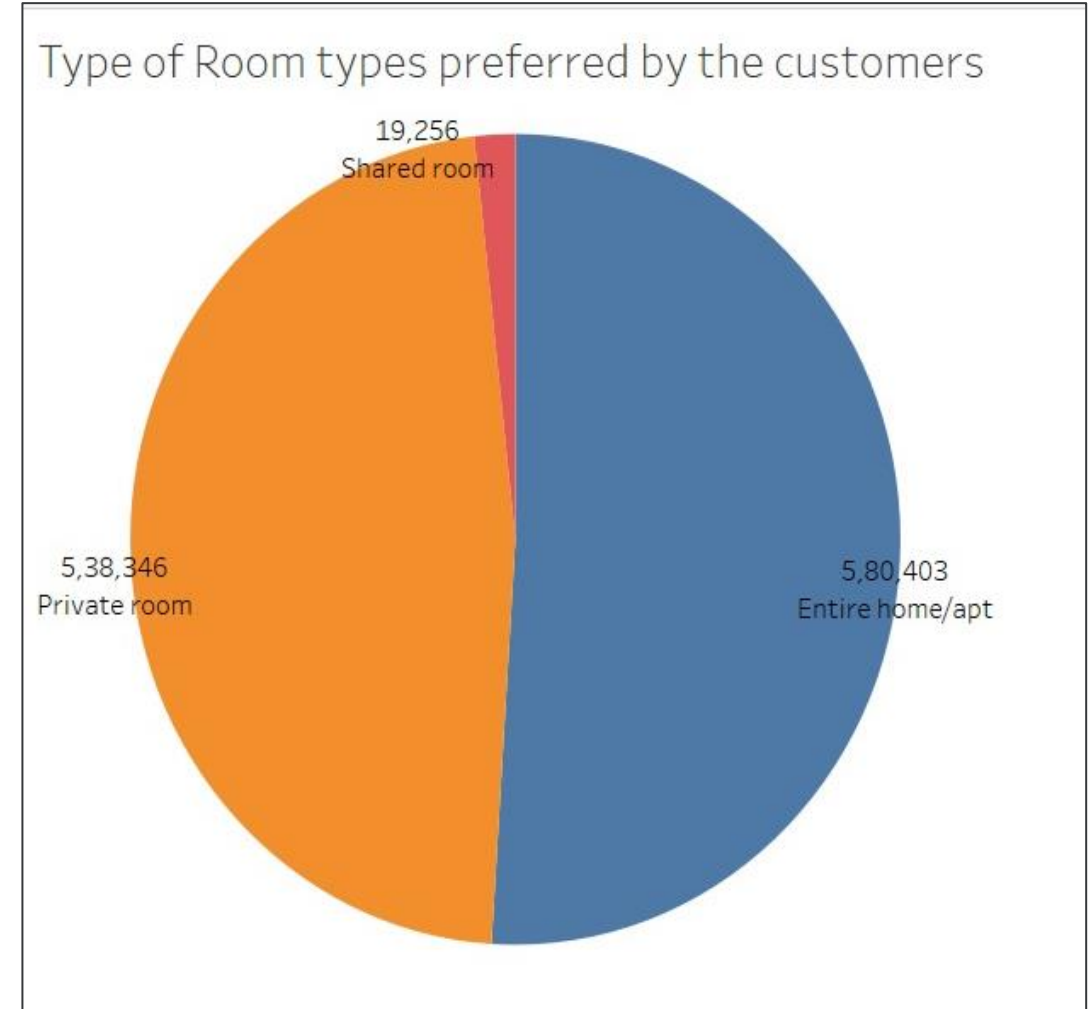
AVERAGE PRICE PREFERRED BY CUSTOMERS

1. The graphs shows that average price in dollars for buying an **entire home or apartment** and preferred by customers is 151\$
2. For private room and shared room is 70\$ and 45\$ accordingly



ROOM TYPES PREFERRED BY THE CUSTOMERS

1. Based on the Number of Reviews the graph shows that **51% people** preferred to stay at Entire home apartment, **47.3%** people preferred to stay at private rooms and only **1.7%** people preferred to stay at shared rooms
2. To boost the number of bookings for shared rooms, Airbnb could concentrate on promoting them through **discounted offers**. By providing discounts specifically for shared accommodations, Airbnb can encourage more users to choose this option and increase the overall booking rate for shared rooms.



NEIGHBORHOODS NEED TO BE TARGETED

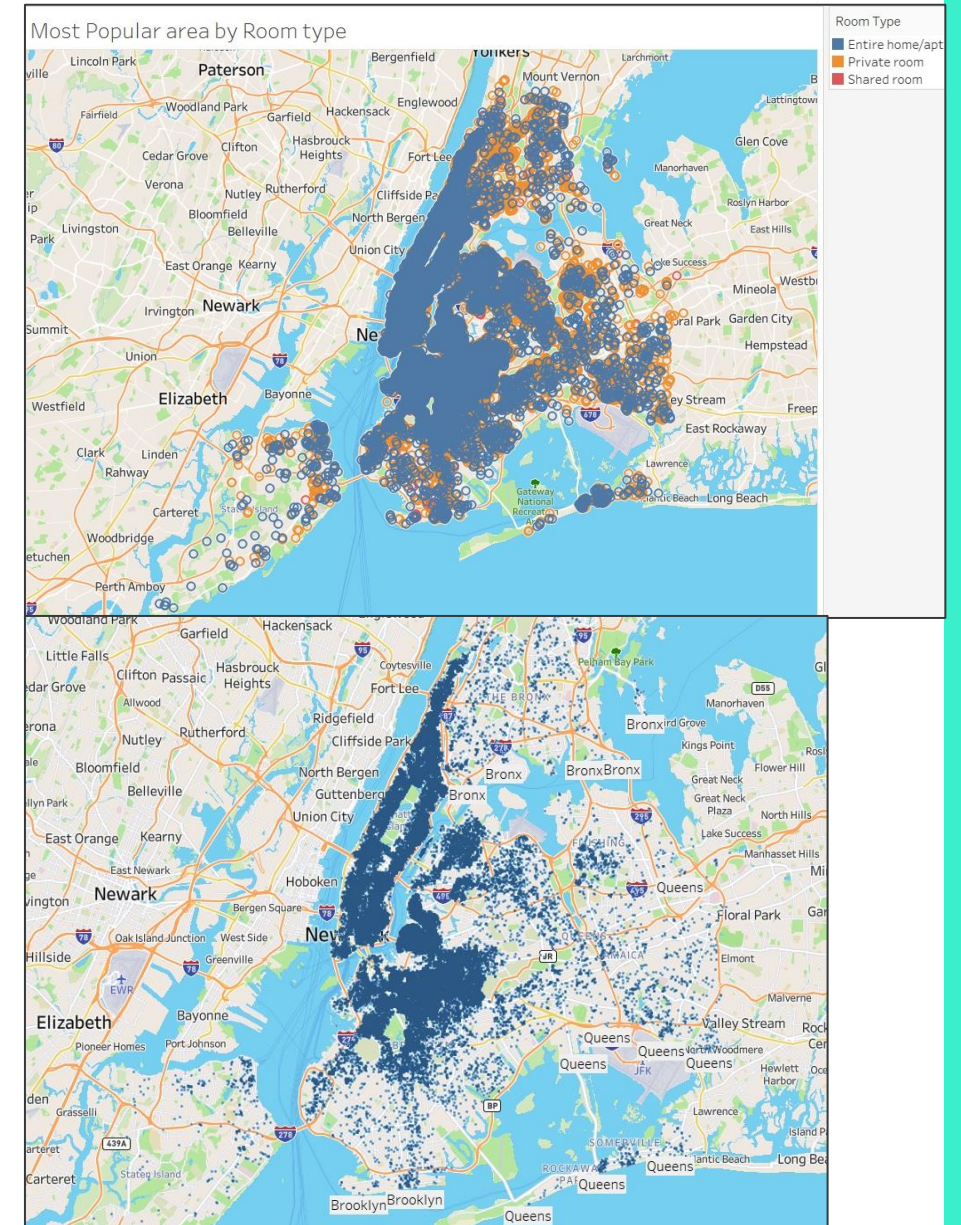
Airbnb can target specific neighborhoods like Williamsburg, Brooklyn, Midtown Manhattan, Bedford, Brooklyn, East Village, Manhattan, and Hell's Kitchen to increase sales. Here's why:

- 1. Vibrant and Trendy: These neighborhoods are known for their vibrant and trendy atmospheres, attracting young professionals and tourists seeking unique experiences.
- 2. Cultural and Artistic Scene: They offer a thriving cultural and artistic scene with art galleries, music venues, and theaters, making them attractive to creative individuals.
- 3. Dining and Nightlife: These areas boast a wide variety of trendy restaurants, cafes, bars, and nightlife options, catering to different tastes and preferences.
- 4. Proximity to Attractions: Many of these neighborhoods are located close to popular landmarks, tourist attractions, and entertainment venues, providing convenience and easy access for visitors.



DENSITY OF PROPERTIES IN NEW YORK

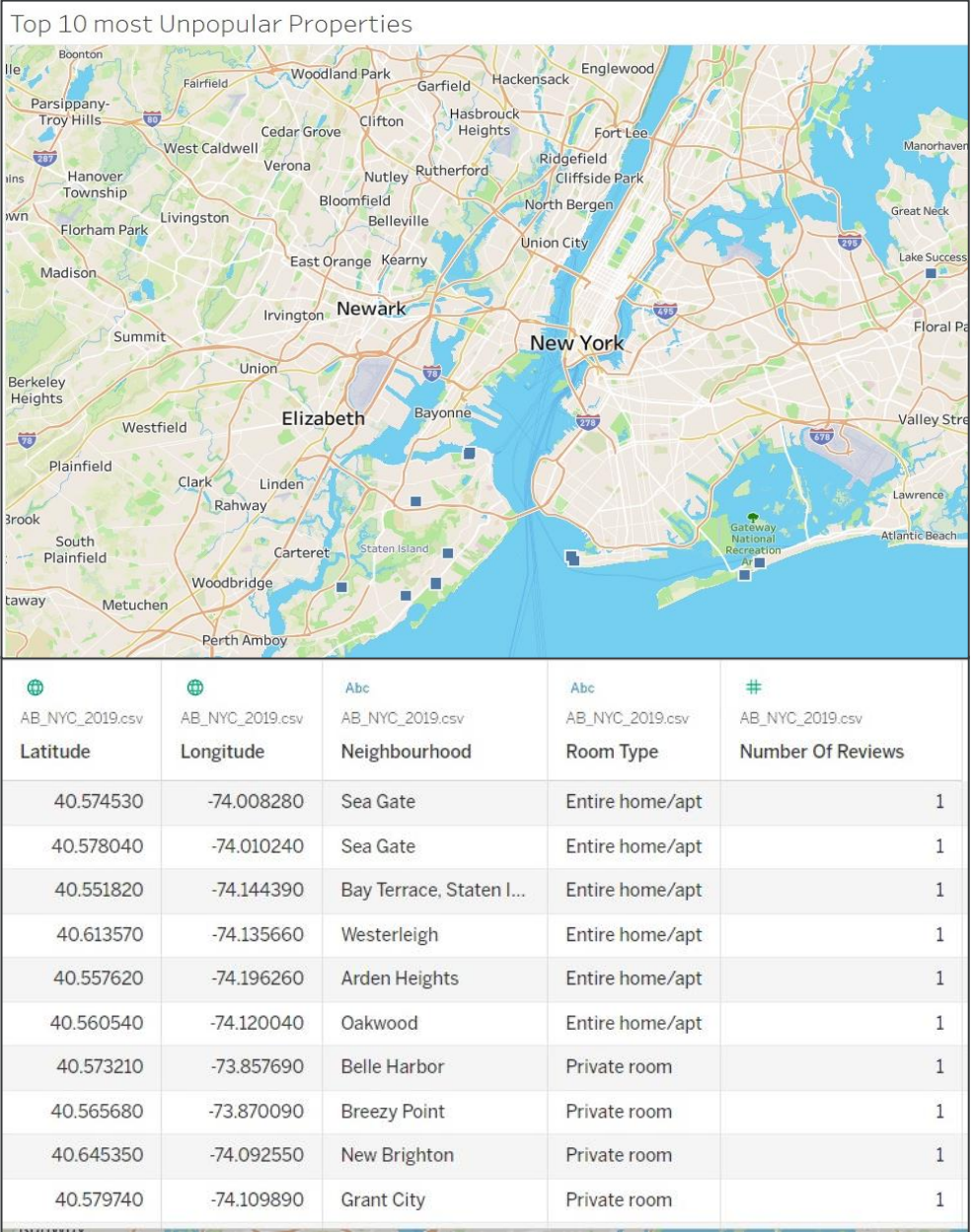
- From the map, we can observe that Manhattan, Brooklyn, and Queens are highly popular locations.
- These areas attract a significant number of people and have a strong demand for various reasons, such as their vibrant atmosphere, cultural offerings, and proximity to attractions.
- The popularity of these boroughs suggests that they are preferred choices for residents and tourists alike.



TOP UNPOPULAR PROPERTIES IN NEW YORK

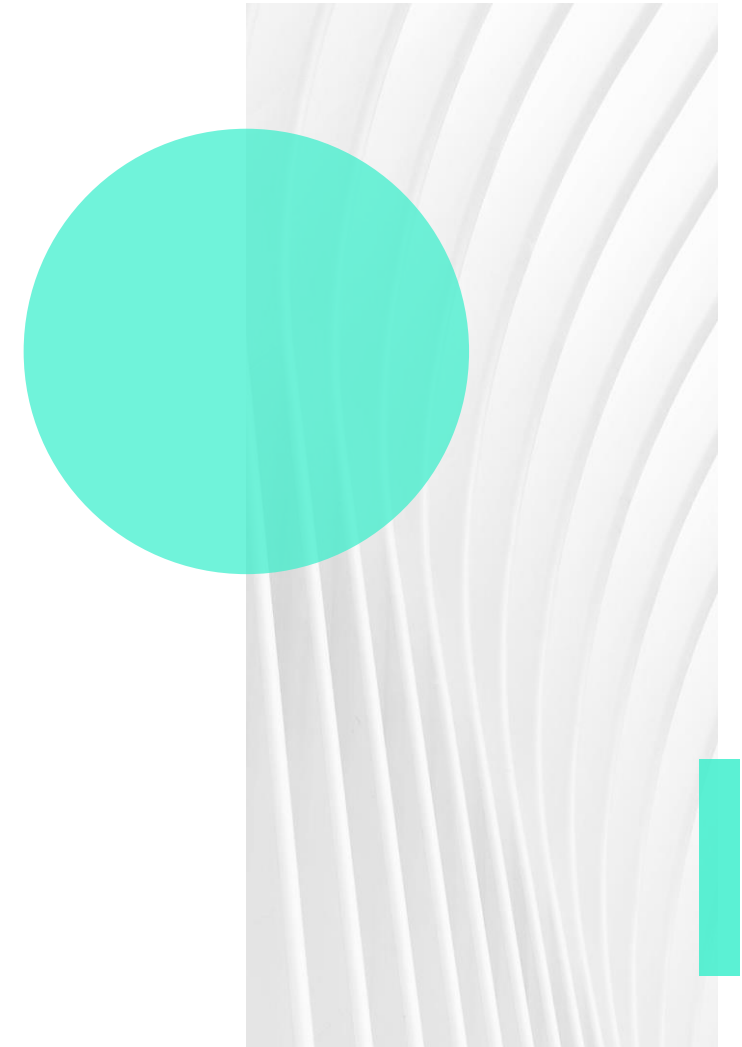
Here are the top 10 unpopular locations in New York City, and the reasons for why they are unpopular:

- **Remote and Isolated:** These locations are situated at the corners or outskirts of the city, away from popular attractions and bustling areas.
- **Lack of Tourist Attractions:** These areas often lack significant tourist attractions or landmarks, making them less appealing for visitors.
- **Limited Accessibility and Amenities:** These locations may have limited transportation options, longer travel times to reach popular destinations, and a scarcity of amenities such as restaurants, shops, and entertainment venues.



ADJUSTMENTS TO MAKE EXISTING PROPERTIES MORE CUSTOMER-ORIENTED

- **Improve Marketing Strategies:** Develop new and effective marketing campaigns to increase sales, especially in areas other than Manhattan and Brooklyn.
- **Attractive Pricing:** Adjust prices to match customer preferences, targeting the \$40 to \$140 range, which is most popular among customers.
- **Enhance Property Amenities:** Upgrade property amenities to meet the expectations of modern travelers, providing comfortable and convenient features.
- **Compelling Property Listings:** Improve property descriptions and showcase unique features to attract potential guests.
- **Exceptional Customer Service:** Prioritize delivering excellent customer service, promptly addressing inquiries and providing personalized attention to guests.



RECOMMENDATIONS

- Focus on **promoting** shared accommodations with discounted offers to increase bookings for shared rooms.
- Consider acquiring properties within the **desired price range** (\$40 - \$140), focusing on private rooms in Manhattan and Brooklyn, and entire homes in the Bronx and Queens.
- **Brooklyn** has shown potential for growth, with an average cost between \$100-\$140 and a significant number of listings.
- **Explore coastal locations** and new construction areas to attract more bookings from customers.
- **Prioritize marketing** efforts in prime locations such as Manhattan and Brooklyn, where there is higher interest from potential guests.
- Analyze seasonal trends and **target marketing** strategies during peak seasons, such as the summer months, to capitalize on increased tourism.
- Identify and **address issues** at low-performing sites with low availability and review counts to improve customer experience.
- Diversify accommodation types by expanding the **availability of shared rooms** in addition to private rooms and entire apartments.
- **Collaborate with top hosts** who have received high review counts to enhance credibility and attract more guests.



APPENDIX

- Data preparation and analysis were performed using Python, while Tableau was used for visualization, ensuring accurate insights.
- Outliers in the six continuous columns were identified and appropriately handled to avoid compromising the analysis.
- The methodology document, "[Methodology of Airbnb New York Data.docx](#)" provides detailed information on the approach used.
- "Reviews per Listing", "Number of Reviews" was used as a measure of popularity to understand customer preferences.



THANK YOU