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MSDA 3060 -Data Visualization and Storytelling Spring 2024 - Course Project

### **Executive Summary**

In our exploration of the New York City Airbnb data for 2019, comprising 48,896 records, we aimed to uncover the underlying dynamics driving the demand for Airbnb listings in this vibrant city. Our journey through the data reveals not just where people stay, but the stories behind each booking, providing insights for hosts and travellers alike. With Manhattan and Brooklyn emerging as hotspots for listings, we have identified distinct patterns in pricing and guest preferences across neighbourhoods. Leveraging these findings, we recommend targeted marketing strategies, enhanced listing amenities, and tailored guest experiences to optimize the Airbnb experience for both hosts and travellers. By embracing these recommendations, hosts can capitalize on the diverse opportunities offered by New York City's vibrant Airbnb market, ensuring memorable stays for guests in the city that never sleeps.

### Introduction

In the ever-evolving landscape of New York City's hospitality sector, Airbnb has emerged as a disruptive force, reshaping the traditional paradigm of accommodations. Since its inception in 2008, Airbnb has transcended mere lodging, offering hosts and travelers a dynamic platform for immersive experiences. As we embark on our analysis of the New York City Airbnb data for 2019, our inquiry delves beyond the surface to uncover the underlying narratives and trends that animate this vibrant marketplace. Against the backdrop of New York City's iconic neighborhoods and cultural landmarks, our investigation aims to unveil the complex interplay of factors influencing guest preferences and host strategies. Through a blend of empirical analysis and qualitative exploration, our study endeavors to shed light on the unique dynamics shaping the Airbnb landscape in the Big Apple, providing valuable insights for industry stakeholders and scholars alike.

### **Intended Audience**

*Travelers:* Travelers are the intended audience for this analysis because they are the consumers of Airbnb accommodations in New York City. By providing insights into pricing dynamics, neighborhood popularity, and room preferences, this analysis empowers travelers to make informed decisions about their lodging options, ensuring that they can tailor their stay to meet their preferences and budget constraints.

Airbnb Hosts: Hosts are also a key audience for this analysis as they play a pivotal role in the Airbnb ecosystem by providing accommodations to travelers. The recommendations offered in this analysis are specifically tailored to help hosts optimize their listings, attract more guests, and maximize their earnings. By leveraging insights into neighborhood preferences and room types, hosts can enhance their listings to cater to the diverse needs and preferences of travelers, thereby increasing their competitiveness in the market.

# Methodology

Data Gathering: The New York City Airbnb dataset for 2019 was sourced from reputable source kaggle, ensuring accuracy and reliability.

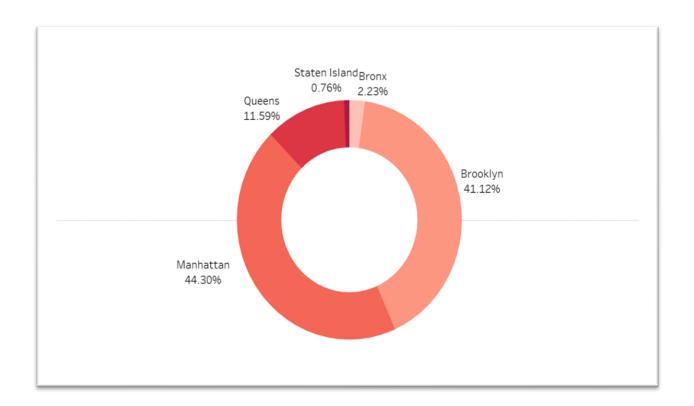
Data Cleaning: Utilizing Pandas and Excel, the dataset underwent thorough cleaning and preprocessing to ensure consistency and accuracy in analysis.

*Data Visualization:* Tableau was employed to create interactive and visually engaging charts and graphs, facilitating clear communication of findings.

Analysis Techniques: Descriptive and exploratory data analysis techniques were utilized to uncover patterns and trends within the dataset, providing valuable insights into guest behaviors and accommodation preferences.

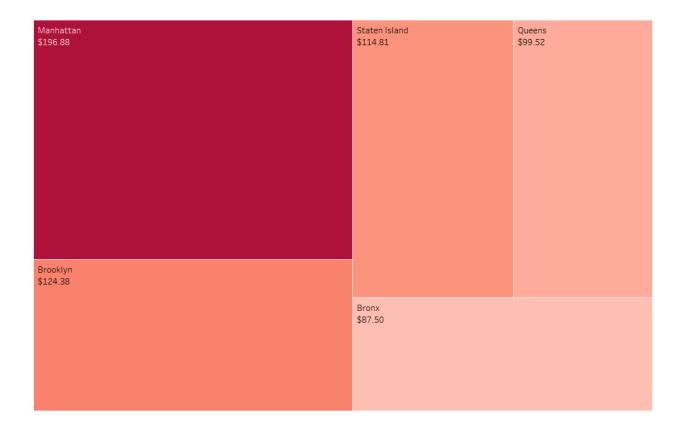
# **Findings**

Distribution of Listings: Manhattan and Brooklyn emerge as the pulsating hubs of Airbnb activity in New York City, collectively securing over 85% of the market share. This dominance underscores their prime locations and vibrant attractions, making them irresistible destinations for short-term rentals. The bustling streets of Manhattan and the eclectic neighborhoods of Brooklyn offer a plethora of experiences, from iconic landmarks to cultural hotspots, enticing travelers from around the globe.



Average Apartment Prices: The allure of Manhattan's upscale experiences is palpable, reflected in its commanding average price of \$196.9 per night. This premium pricing caters to travelers seeking luxury and exclusivity, elevating Manhattan to the epitome of sophistication in the Airbnb market. In contrast, the Bronx and Staten Island present more budget-friendly options, providing affordable accommodations that cater to diverse preferences and budget considerations. This diversity in

pricing underscores the city's multifaceted appeal, offering something for every traveler's taste and budget.

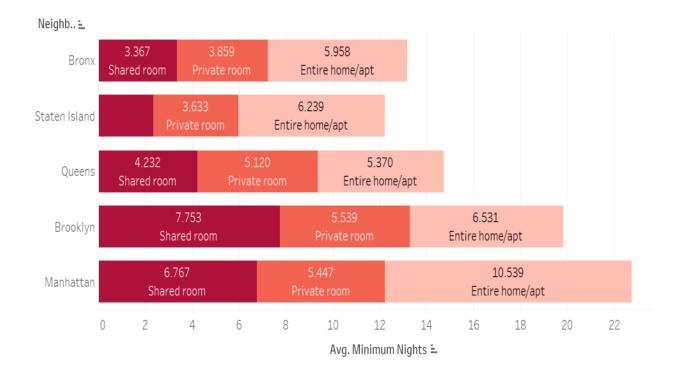


Room Types and Pricing: Analysis of room types unveils a universal preference for privacy and comfort among guests, as entire homes or apartments command higher prices across all neighborhoods. Manhattan's status as a top destination is reaffirmed by its premium prices, reflecting the allure of having one's own space amidst the city's bustling energy. On the other hand, Brooklyn's diverse offerings cater to budget-conscious travelers, providing a range of options to suit varying needs and preferences. This trend highlights the value guests place on personalized accommodations, signaling a shift towards immersive experiences in the heart of the city.

Neighbourhood Group

Room Type	Bronx	Brooklyn	Manhattan	Queens	Staten Island
Entire home/apt	\$127.51	\$178.33	\$249.24	\$147.05	\$173.85
Private room	\$66.79	\$76.50	\$116.78	\$71.76	\$62.29
Shared room	\$59.80	\$50.53	\$88.98	\$69.02	\$57.44

Accommodation Preferences: Understanding guest behaviors is paramount in tailoring experiences to diverse preferences across neighborhoods. Manhattan's appeal lies in its ability to attract longer stays, averaging 10.539 nights, appealing to both tourists seeking to immerse themselves in the city's vibrant culture and business travelers in need of extended accommodations. Conversely, Staten Island serves as a serene sanctuary within the bustling city, with shorter stays averaging 2.333 nights. This preference reflects its role as a peaceful retreat, offering respite from the hustle and bustle of urban life. By discerning these nuanced preferences, hosts can tailor their offerings to create memorable experiences that resonate with guests, further enhancing the allure of Airbnb in New York City.



### Recommendations

#### For Travelers:

For travelers planning a trip to New York City, we recommend considering the following options based on their preferences and budget. Manhattan stands out as the ideal destination for those seeking a luxurious and vibrant experience. With its iconic landmarks, world-class dining, and buzzing nightlife, Manhattan offers a premium experience that's hard to beat. Travelers can indulge in the excitement of the city by booking a stylish apartment or upscale loft in the heart of Manhattan, ensuring easy access to all the attractions and amenities the area has to offer.

Alternatively, for budget-conscious travelers looking to stretch their dollars without compromising on quality, Brooklyn is the perfect choice. This diverse borough is teeming with cultural gems, trendy neighborhoods, and a thriving arts scene. Travelers can explore charming brownstone streets, sample delicious cuisine from around the world, and unwind in a cozy apartment or charming townhouse. Brooklyn provides an authentic local experience that allows travelers to immerse themselves in the unique character and charm of the borough.

Regardless of the chosen borough, travelers are encouraged to book an entire home or apartment for maximum comfort and privacy. Whether traveling solo, with a partner, or with friends and family, having their own space to relax and recharge is key to a memorable stay in the city.

#### For Hosts:

For hosts looking to optimize their listings and attract more guests in New York City's competitive Airbnb market, we offer the following recommendations. In Manhattan, hosts are advised to highlight the luxury and convenience of their space to attract travelers seeking a premium experience. By emphasizing the proximity to iconic attractions, upscale amenities, and stunning views, hosts can appeal to guests looking for the ultimate New York City experience.

In Brooklyn, hosts should showcase the unique character and charm of their neighborhood to appeal to budget-conscious travelers seeking an authentic local experience. Highlighting nearby cafes, boutiques, and cultural attractions, and offering competitive rates for longer stays can attract guests looking to explore the borough in depth.

Hosts are encouraged to consider offering special amenities such as self-check-in, flexible cancellation policies, and discounts for longer bookings to differentiate their listings. Providing a personalized and welcoming experience will help hosts attract more guests and earn positive reviews in New York City's competitive Airbnb market.

### **Conclusion**

In New York City, the demand for entire accommodations reflects a common desire for a peaceful retreat amid the city's hustle and bustle. By analyzing these trends, we gain valuable insights into the diverse accommodation preferences and travel patterns across the city's bustling neighborhoods. For instance, Manhattan attracts longer stays, averaging 10.539 nights, appealing to both tourists and business travelers drawn to its vibrant energy. Conversely, Staten Island, with its serene charm, sees shorter stays averaging just 2.333 nights.

Accommodation costs play a crucial role in budgeting for the overall travel experience. Our visualizations underscore Manhattan's undisputed dominance in the NYC Airbnb market, both in availability and premium pricing. In Manhattan, where the energy is electric and demand high, expect to pay a premium for private rooms, averaging \$820.5, and entire homes at \$2,584 for your trip according to the average stay and price. For those seeking a more budget-friendly option, the Bronx and Staten Island provide affordable alternatives ranging from \$500 to \$900 on average. Meanwhile, shared rooms offer communal living experiences, with Manhattan leading at \$600.3. Whether you're seeking the vibrant energy of Manhattan or exploring the more affordable neighborhoods, there is a wide range of options to suit every traveler's preference and budget.

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