

Airbnb Booking Analysis (EDA)

This is EDA Capstone Project on topic Airbnb booking analysis



Sample-EDA-Airbnb

Problem Statement

This project's primary goal is to better understand the dynamics of Airbnb rentals in New York City (NYC) by examining a range of variables, including cost, availability, neighborhood associations, types of rooms, and reviews from previous guests. We hope to learn more about pricing trends, neighborhood popularity, customer satisfaction, and market opportunities by looking at the average price, number of listings, availability, and customer reviews. Potential investors and hosts will find this analysis to be very helpful in making decisions and in understanding the main drivers of the popularity and profitability of Airbnb rentals in New York City.

Business Objective

This is the most important part of any analysis as we must understand the needs of a customer/business owner for what task they require analysis on and work as per their requirements. The main motive was to analyze the given dataset to provide the company with the information that will help to analyze their business and take strategically important decisions to further grow their business to new heights.

The principal aim of this project is to enhance the client's Airbnb rental enterprise in New York City through the optimization of occupancy rates, profitability, and guest contentment. The goal is to raise occupancy rates, boost income, and guarantee great guest experiences by putting data-driven strategies and insights into practice. This will ultimately propel the client's business to success and growth in the cutthroat NYC Airbnb market.

Technique

Data acquisition: Get a representative sample of the company's data, such as availability, review trends, and customer demographics, from Airbnb.

Data cleaning: Data cleaning entails removing any incomplete or missing information and making sure the data is in an easily analyzed format.

Data Visualization: Plots and charts can be used to visualize data and help spot trends and patterns. For instance, you may make scatter plots to show correlations between distinct variables or histograms to comprehend the distribution of different continuous data, such as price and the number of reviews.

Data synthesis: To comprehend the relationships between various variables and summarize the data, apply statistical techniques. For example, to comprehend the distribution of continuous data, such as price and number of reviews, you could compute means, medians, and standard deviations. Optimizing occupancy rates, profitability, and guest satisfaction in the client's New York City Airbnb rental business is the overarching objective of EDA for booking analysis.

Solution to Business Objective

Based on the analysis of the NYC Airbnb dataset, here are some suggestions to help the client achieve their business objectives:

1. **Optimize Pricing Strategy:** Analyze the relationship between pricing and factors such as location, property type, and amenities. Adjust prices accordingly to maximize occupancy rates and profitability. Consider implementing dynamic pricing strategies based on demand and seasonality.
2. **Improve Listing Quality:** Enhance the attractiveness and competitiveness of listings by improving the quality of descriptions, photos, and amenities. Highlight unique selling points and ensure accurate and detailed information to attract potential guests.
3. **Enhance Customer Experience:** Focus on providing excellent customer service and ensuring a positive experience for guests. Promptly address any issues or concerns, and encourage guests to leave reviews to build credibility and attract more bookings.
4. **Maintain Property Availability:** Ensure a consistent availability of properties throughout the year, especially during peak tourist seasons and events. Plan maintenance and renovation schedules to minimize disruptions and maximize occupancy rates.
5. **Monitor Competitor Activity:** Stay updated on the offerings and prices of competitors in the local market. Adjust strategies accordingly to remain competitive and capture potential guests.
6. **Consider Special Offers and Discounts:** Implement promotional offers, discounts, or loyalty programs to attract guests and encourage repeat bookings. Monitor the impact of these offers on occupancy rates and profitability.

Conclusion

The following major conclusions were found by the 2019 Airbnb NYC project:

- New York City has seen a notable increase in listings, pointing to a thriving market for short-term rentals; additionally, Manhattan has emerged as the borough with the highest concentration of Airbnb listings.

- Manhattan consistently had the highest average nightly rates, according to pricing analysis, while the outer boroughs had more reasonably priced options.

- The most prevalent listing types were for entire homes and apartments, suggesting that both hosts and guests prefer private accommodations.

Shared rooms, on the other hand, were also offered, accommodating a range of spending capacities and lodging choices.

- A trend toward using short-term rentals as a source of extra income was indicated by the host demographics, which showed that most hosts in New York City were people who rented out their primary residences.

- The existence of hosts numerous listings brought attention to the rise of professional hosts and possible commercialization issues.

It is significant to remember that the project's conclusions were based only on data from 2019, and that the market dynamics may have been further shaped by later changes in regulations.

