

Capstone Project Submission

Instructions:

- i) Please fill in all the required information.
- ii) Avoid grammatical errors.

Team Member's Name, Email and Contribution:

Member 1: Kashif Kamran

Email: kashifkamran639@gmail.com

Contribution:

1. Clean and prepare the data for analysis.
2. Done Initial analysis and helped in visualization.
3. Prepared Project Summary
4. Prepared Key Notes and Conclusion

Member 2: Raja Chowdhury

Email: rajachowdhury2468@gmail.com

Contribution:

1. Done all the coding and prepare all the Visualization for analysis.
2. Helped in Data Cleaning
3. Added Useful Codes to simplify the analysis.
4. Helped in Key Notes and Conclusion

Member 3: Aman Jain

Email: amanjn932@gmail.com

Contribution:

1. Prepared Technical Documentation
2. Helped in Data Cleaning
3. Help in Summary Preparation & PPT
4. Helped in Key Notes and Conclusion

Member 4: Sandipan Das

Email: sandipan.das202@gmail.com

Contribution:

1. Prepared Project Presentation
2. Helped in Data Cleaning
3. Help in Summary Preparation & Technical Documentation
4. Helped in Key Notes and Conclusion

Member 5: Sucheta Ghosh

Email: suchetaghosh9@gmail.com

Contribution:

1. Helped in Data Cleaning
2. Help in Summary Preparation & PPT
3. Helped in Key Notes and Conclusion

Please paste the GitHub Repo link.

Github Link:- https://github.com/kashifkamran639/Airbnb-NYC-2019/blob/main/Kashif_Kamran_Airbnb_Bookings_Analysis_Capstone_Project.ipynb

Please write a short summary of your Capstone project and its components. Describe the problem statement, your approaches and your conclusions. (200-400 words)

Problem Statement:

Since 2008, guests and hosts have used Airbnb to expand on traveling possibilities and present a more unique, personalized way of experiencing the world. Today, Airbnb became one-of-a-kind service that is used and recognized by the whole world. Data analysis on millions of listings provided through Airbnb is a crucial factor for the company. These millions of listings generate a lot of data - data that can be analyzed and used for security, business decisions, understanding of customers' and providers' (hosts) behavior and performance on the platform, guiding marketing initiatives, implementation of innovative additional services and much more.

This dataset has around 49,000 observations in it with 16 columns and it is a mix between categorical and numeric values.

Explore and analyze the data to discover key understandings

Our Approach:

We cleaned and preprocessed the data, analyze each column, handled Required Outliners, and then we performed the Exploratory Data Analysis to extract information from the data to answer the following questions.

- What can we learn about different hosts and areas?
- What can we learn from predictions? (ex: locations, prices, reviews, etc)
- Which hosts are the busiest and why?
- Is there any noticeable difference of traffic among different areas and what could be the reason for it?

Key Findings:

1. Manhattan has most number of listings, followed by Brooklyn and Queens. Staten Island has least number of listings.
2. Manhattan and Brooklyn make up for 87% of listings available in NYC.
3. Brooklyn and Manhattan are most liked neighborhood groups by people.
4. Queens has significantly less host listings than Manhattan. So, we should take enough steps to encourage host listings in Queens.
5. The maximum demand is for private rooms and entire home/apartment. People are more interested in cheaper rentals.

Conclusion:

- We can conclude from the analysis that Manhattan is the Top neighborhood group by number of listings and highest rental prices 7 out of 10 top Host are from Manhattan followed by Brooklyn. One of the Probable reasons for most preferred Neighbor Group is that Manhattan is a world-famous for its museums, stores, parks and theatres - and its substantial number of tourists thus attract Entire Home/Apt as favorite stay options and stayed longer, as demand is high prices are much higher in this borough.
- At 2nd Brooklyn having significant number of listings and more affordable prices if compared to Manhattan.
- Rest 3 neighborhood groups namely Queens, Bronx and Staten Island are observing very less listing options available, especially on Staten Island. Considering that those are residential areas, it is possible that many guests choose these locations to save up money or perhaps to visit family and friends who live in this area.