

# EDA on Airbnb Bookings Analysis

**Team Name – mechd (2 members)**

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**Project Contribution: -**

- Data Wrangling – Handled Null Values, Re-evaluated the minimum price of listings which were initially assigned to zero, conversion of minimum nights to at most a year.
- Analysis of hosts and neighbourhoods based on possible turnover
- Analysis of Room type selection and distribution based on price and its availability
- Analysis of top ten neighbourhoods based on (median) listing price
- Analysis of properties/hosts mandatory stay periods for single booking
- Analysis on types of visits based on mandatory stay periods for single bookings
- Marketing Initiative and Campaigns

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**Project Contribution: -**

- Data Wrangling – Handled Null Values, Re-evaluated the minimum price of listings which were initially assigned to zero, conversion of minimum nights to at most a year.
- Plot Correlation Matrix
- Analysis of preferred location against average price
- Analysis of where most hosts are located
- Analysis of highest and lowest rent paying as per locations
- Analysis of most popular hosts based on listings and reviews
- Analysis on establishing relation between neighbourhood groups and availability of rooms
- Colab to pdf conversion

**GitHub Repo & Drive Link:**

**Github Link: -**

[https://github.com/pasayat-siddhartha/Capstone\\_Project01\\_EDA\\_Airbnb\\_Booking\\_Analysis](https://github.com/pasayat-siddhartha/Capstone_Project01_EDA_Airbnb_Booking_Analysis)

**Drive Link: -**

[https://drive.google.com/drive/folders/1TyA4li1fR54lZF0bDv0jrsPgff\\_3D4m?usp=sharing](https://drive.google.com/drive/folders/1TyA4li1fR54lZF0bDv0jrsPgff_3D4m?usp=sharing)

## **Project Summary**

Airbnb, as in “**Air Bed and Breakfast**,” is a service that lets property owners rent out their spaces to travelers looking for a place to stay. Travelers can rent a space for multiple people to share, a shared space with private rooms, or the entire property for themselves. The model also gives you the opportunity to customize and personalize your guests’ experience the way you want. Airbnb was started in 2008 by Brian Chesky and Joe Gebbia, based in San Francisco California. The platform is accessible via website and mobile app.

We have the Airbnb Bookings dataset for the year 2019 on NYC. NYC is one of the most expensive, posh and densely populated localities to live in USA. We had to perform a well scrutinized and in-depth analysis to unravel and unveil a lot of relations and information that will give us a chance to implement good marketing initiatives and creative campaigns.

The dataset is affluent in a lot of information like coordinates of localities, host names, prices, room types, availability, minimum nights, reviews etc. With these features present we tried to establish and extract information related to posh localities in NYC, top hosts based on reviews, listings, minimum mandatory stays, types of room available and its distribution, popular neighbourhoods based on possible turnover generated etc. We did perform data wrangling, handled missing and null values, and re-evaluated certain features. We’ve plotted neighbourhood wise data and distribution of our numerical features by performing univariate and bivariate analysis with multiple features and relations. We haven’t handled outliers in our analysis and focused mostly on the neighbourhood group of NYC as compared to neighbourhood. We weren’t able to perform sentiment analysis or the property quality analysis due to the absence of data related to it, but can surely come up with Manhattan and Brooklyn being the posh and elitist of neighbourhood groups. People here generally prefer a lavish and extravagant lifestyle as these are the buzz places and financial hubs of NYC. Room wise preference and presence is mostly for Entire Home/Appt. and Private rooms as compared to shared ones. Location plays a crucial factor in deciding a property price but that doesn’t mean property in popular locations will stay occupied for most of the season. Most high-end areas prefer guests to stay for longer duration during their visits.

We have also come up with certain marketing campaigns and creative initiatives focused on neighbourhood groups like festive discounts, loyalty coupons, frequent check-in cards and more to increase the traction and business viability.