# AIRBNB Listing 2024 Analysis

This Listing analysis gives an insight on prices of Private Rooms, Home/Apartment, Hotel Room and Shared Room that are listed on Airbnb in the state of USA. They have been segmented into neighbourhood groups of Brooklyn, Manhattan, Queens, Bronx and Staten Island. It also includes correlational analysis to understand the dependency of price based on different factors like reviews, room type, availability, etc. This analysis provides us an understanding of the Airbnb listed stays and helps us in deciding the best time and type of room to choose for the stay. Also, how the prices change based on time and locations. For more analysis and better understanding go through the document and the project file.
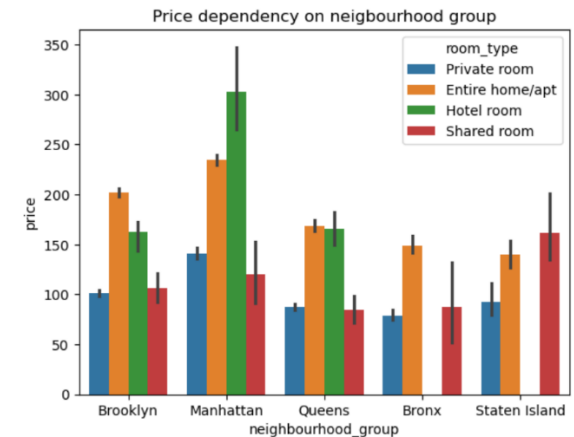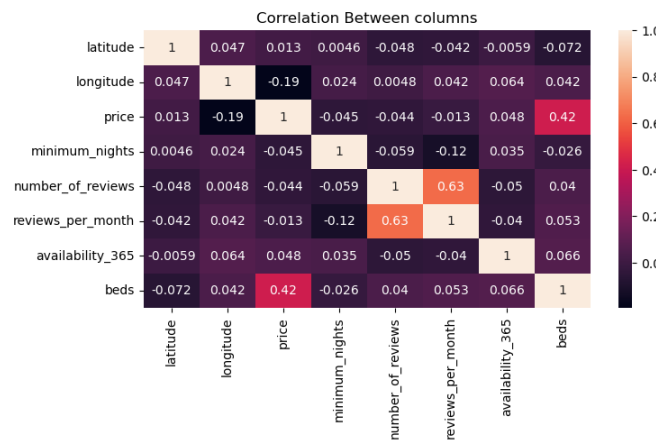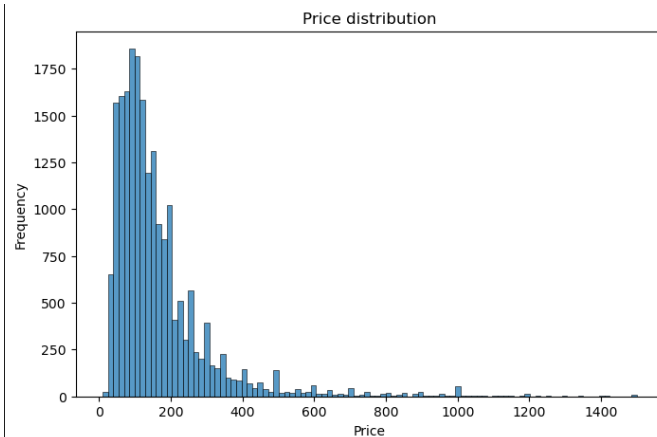
Data Analysis and Visualization (EDA)

Univariate Analysis

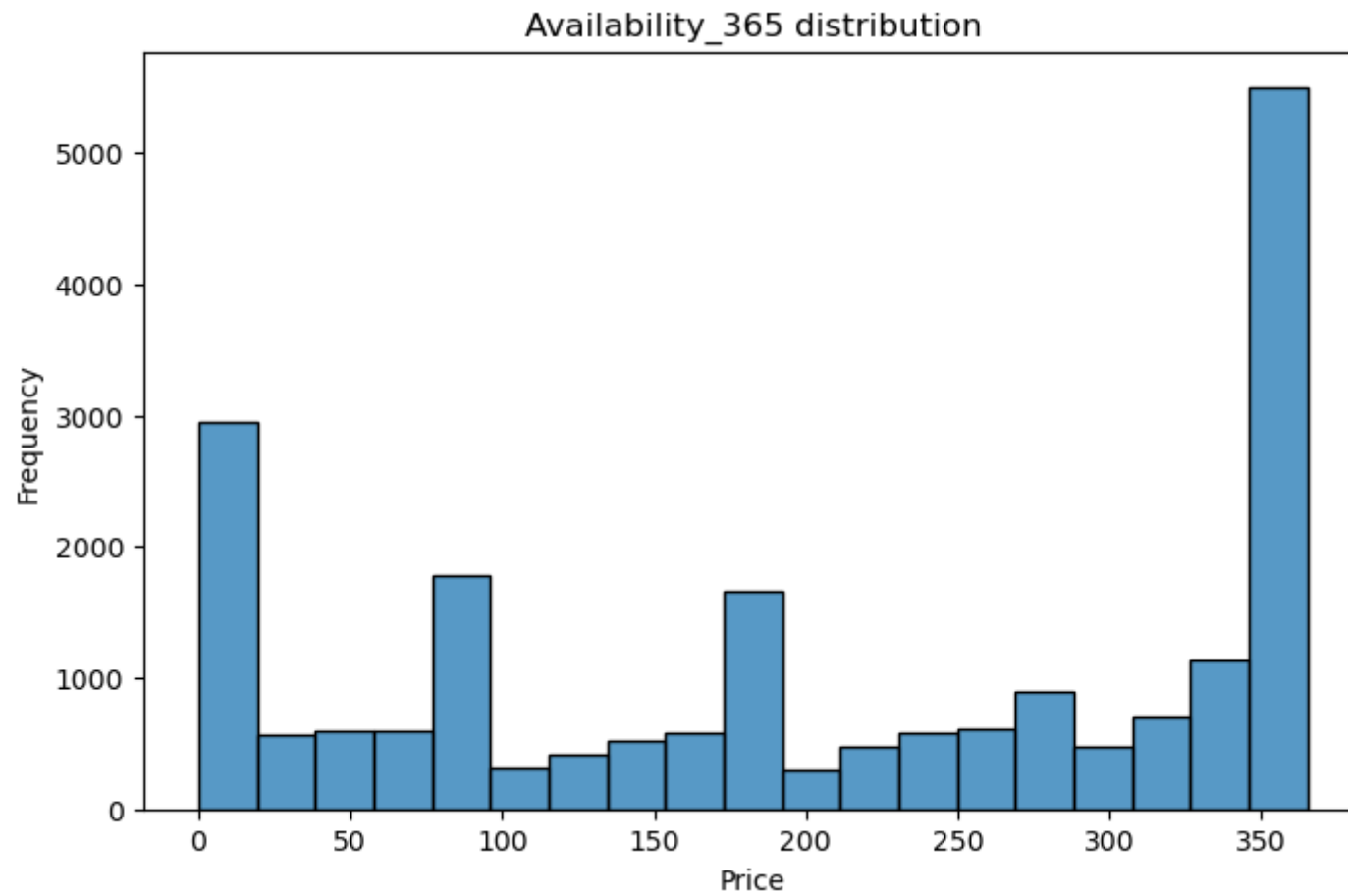1) Price Distribution

Price distribution
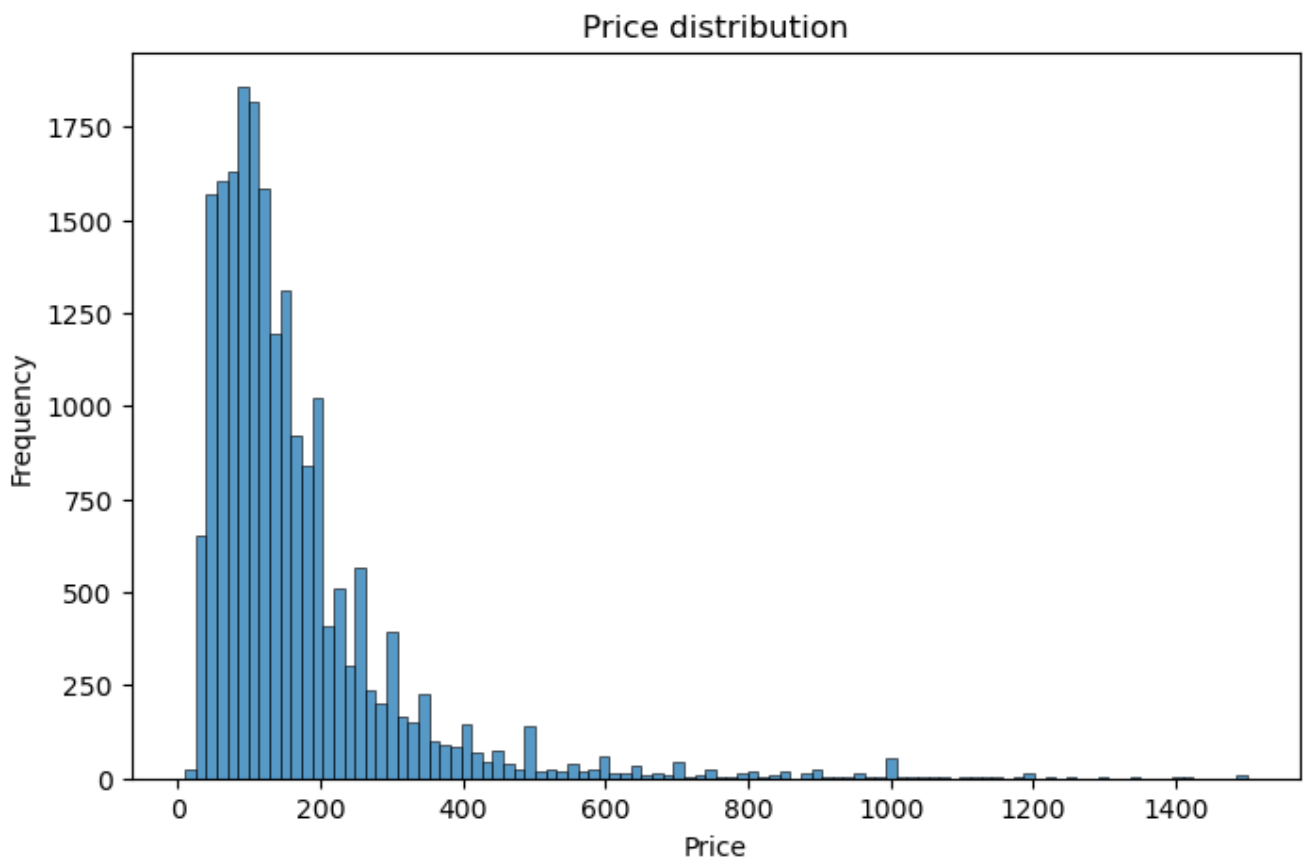
Insight - Most of the rooms are priced between $ 10 to 300
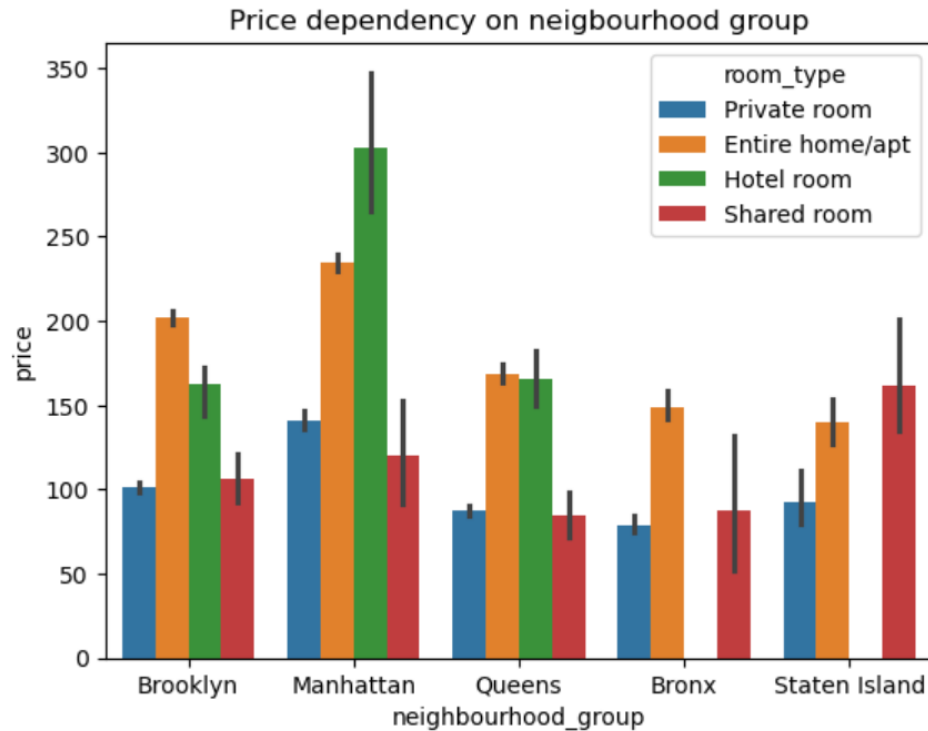
2) Availability Distribution

Availability_365 distribution

Insight - Most of the rooms are available in the beginning and end of the year

Bivariate Analysis

1) Comparison of price variance in different neighbour groups based on room type

Price dependency on neigbourhood group

insights:-

1. *Brooklyn has Expensive Homes or Appartments but Cheaper Private Rooms*
2. *Manhattan has Expensive Hotel Rooms but Cheaper Shared Rooms*
3. *Queens has Expensive Homes or Appartments but Cheaper Shared Rooms*
4. *Bronx has Expensive Homes or Appartments bu Cheaper Private Rooms*
5. *Staten Island has Expensive Shared Rooms but Cheaper Private Rooms*
6. *We can say, on an average Private Rooms are Cheaper in all neighbourhood groups*

2) Comparison of Price dependency on reviews based on neighbourhood group
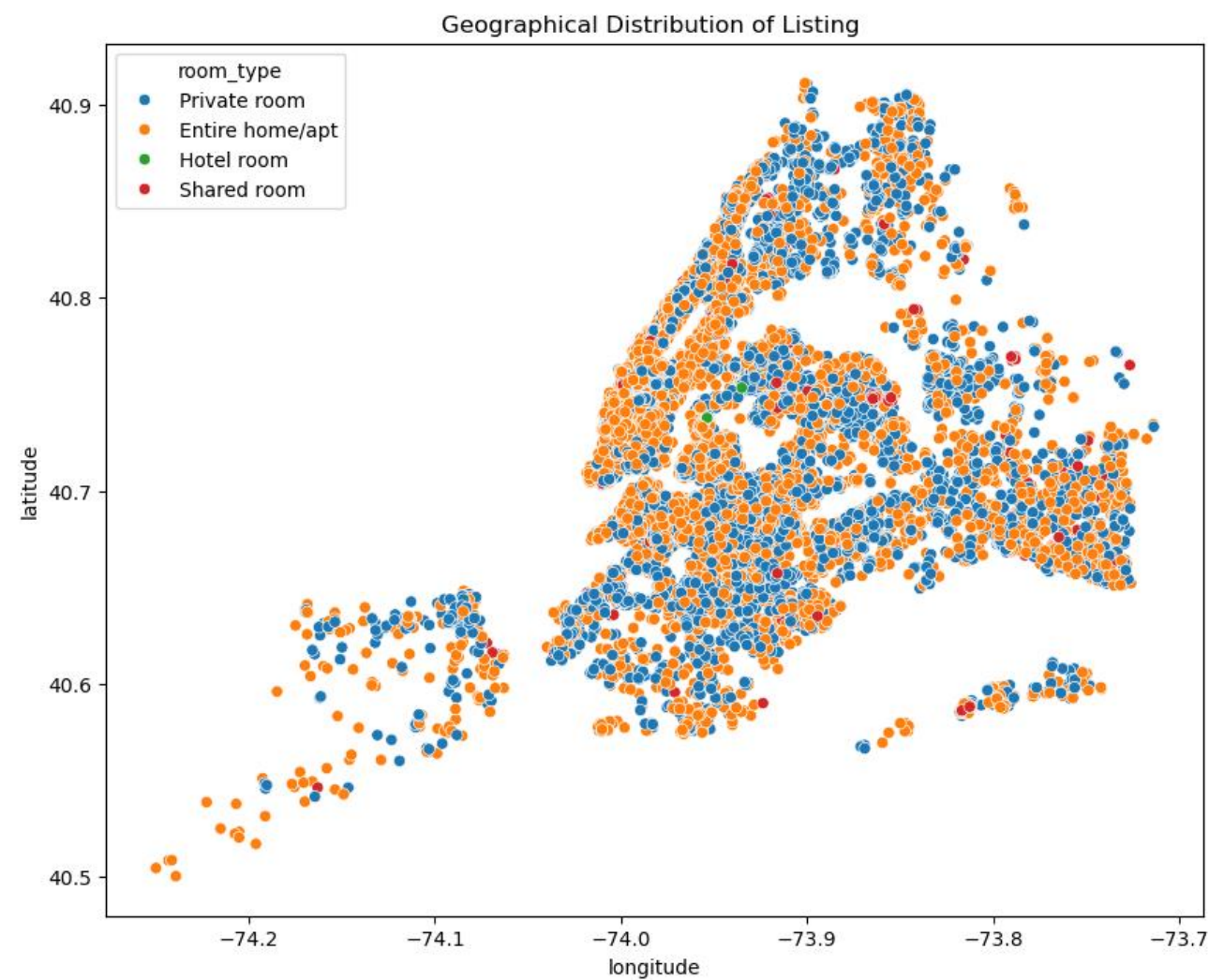

Price dependency on reviews

Insight - There is negative correlation between Price and Number of Reviews
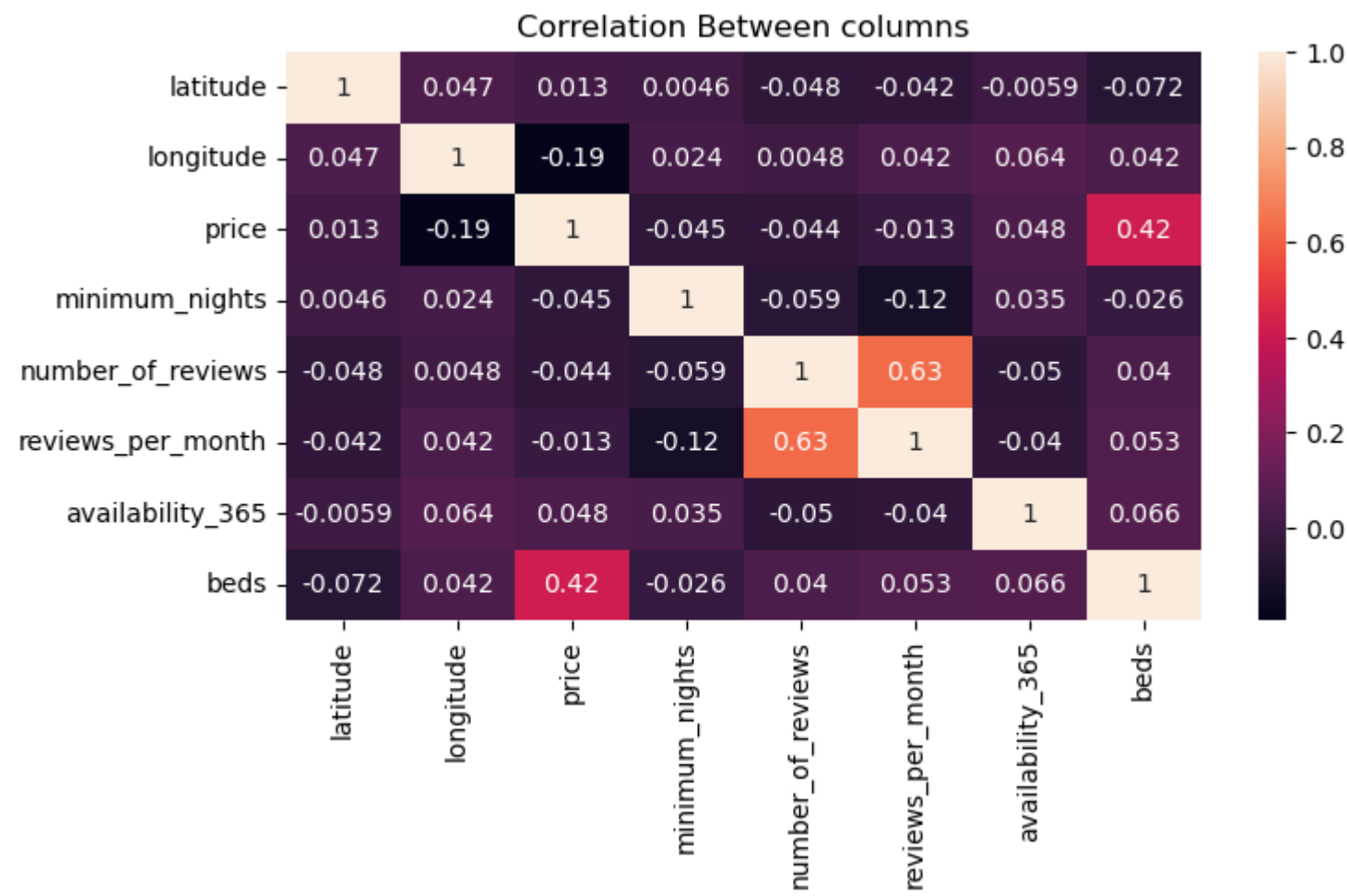
3) Pairplots for Comparisons
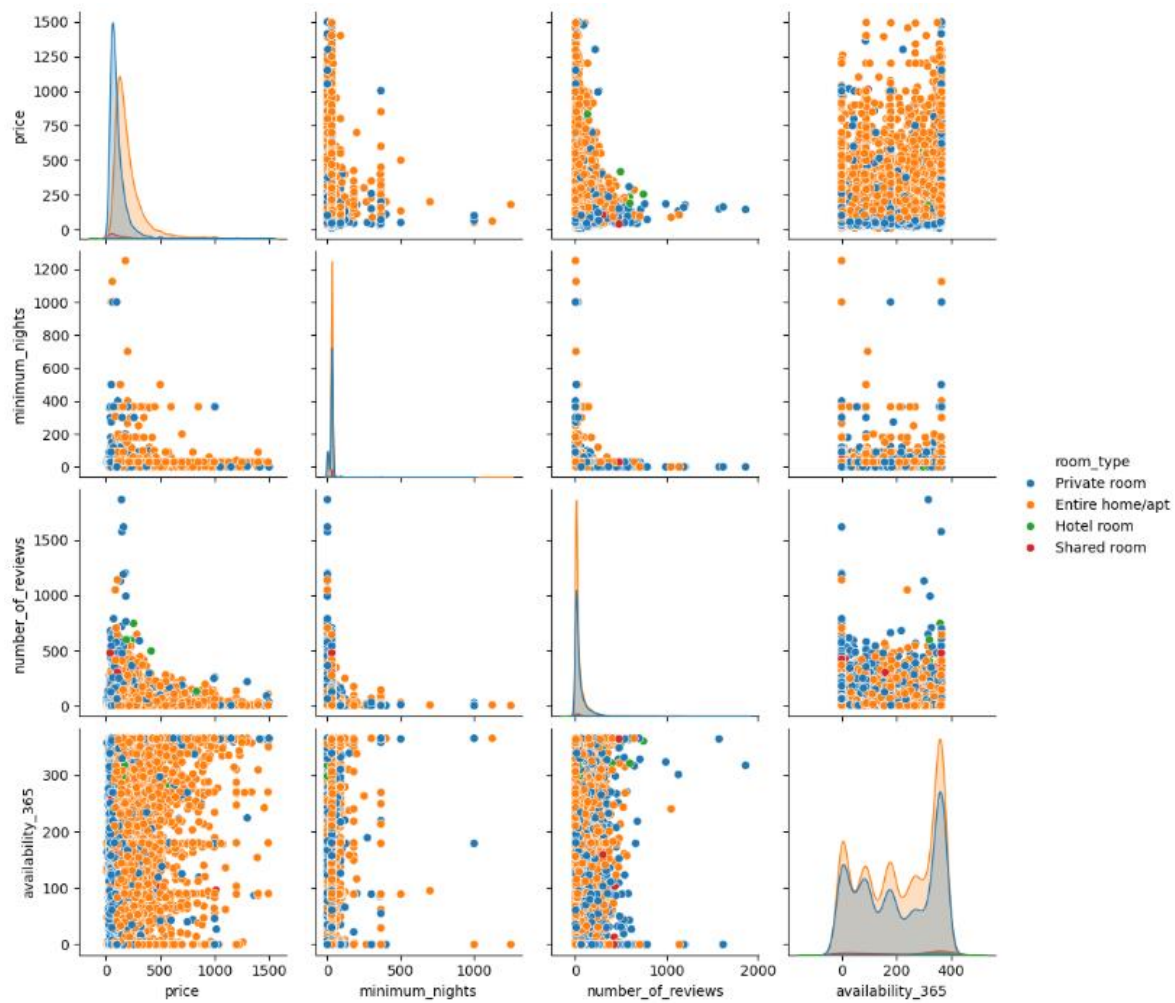
Insight - Shows the Correlation between the selected Columns

4) Geographical Distribution Based on Room Type

Geographical Distribution of Listing

5) Geographical Distribution Based on Room Type

Correlation Between columns

	latitude	longitude	price	minimum_nights	number_of_reviews	reviews_per_month	availability_365	beds
latitude	1	0.047	0.013	0.0046	-0.048	-0.042	-0.0059	-0.072
longitude	0.047	1	-0.19	0.024	0.0048	0.042	0.064	0.042
price	0.013	-0.19	1	-0.045	-0.044	-0.013	0.048	0.42
minimum_nights	0.0046	0.024	-0.045	1	-0.059	-0.12	0.035	-0.026
number_of_reviews	-0.048	0.0048	-0.044	-0.059	1	0.63	-0.05	0.04
reviews_per_month	-0.042	0.042	-0.013	-0.12	0.63	1	-0.04	0.053
availability_365	-0.0059	0.064	0.048	0.035	-0.05	-0.04	1	0.066
beds	-0.072	0.042	0.42	-0.026	0.04	0.053	0.066	1

Insight - Shows the correlation heatmap between every column

Conclusion

We can conclude by saying that most of the rooms are priced between $10 and $300 and are mostly available during the beginning and the end of the year, also rooms in Bronx are most affordable. It is better to choose a Private Room in any state as it's the cheapest option, prices do not depend on reviews, so look for room with better review.

How to use.

- Download the Folder named 'AIRBNB Listing 2024 Analysis'.

- Unzip the file.

- Open the file named 'AIRBNB Analysis'.