**METHODOLOGY AND ASSUMPTIONS FOR AIRBNB CASE STUDY**

**Assumptions:**

Price Representation: The "Price" column is assumed to represent the price per night for Airbnb listings.

Customer Preferences: The average price and total number of reviews are considered fundamental measures for identifying customer preferences.

**Analysis Metrics:**

* Average price: Calculated as the mean price of listings.
* Total number of reviews: Sum of the reviews for each listing.
* Average minimum nights: Calculated as the mean minimum nights required for booking across different neighborhoods.
* Dual Axis Plots: In dual axis plots, both axes are not synchronized due to widely ranging values in magnitude for the features being plotted.

Excluded Column: The "last\_review" column was excluded from analysis.

Methodology:

**Exploratory Data Analysis (EDA):**

Detailed EDA was conducted on Airbnb data to understand various aspects of the dataset.

Data Cleaning and Processing:

Python was used for finding missing values and performing data cleaning tasks.

Sanity checks were performed on columns like "Id" and "Price" to ensure data integrity, including verifying unique IDs and absence of negative prices.

**Visualization Creation:**

Tableau and Power Bi was used to create visualizations for identifying customer preferences based on:

* Neighborhood Group
* Room Type
* Average Price
* Number of Reviews
* Average Minimum Nights Spent

**Insights Extraction:**

* Insights were derived from the visualizations, highlighting important trends and patterns in customer preferences based on the analyzed factors.
* By following this methodology and considering the stated assumptions, the analysis aimed to provide valuable insights into customer behavior and preferences in the Airbnb dataset.