Project: Manhattan Vacation Rental Market Analysis

Project Goal:

To analyze the current Airbnb listings in Manhattan, New York City, to identify profitable investment opportunities.

Data Analysis Tasks:

Part 1: Explore and Filter the Data

- **Data Cleaning:**
  - Identify and handle missing values.
  - Correct data inconsistencies and errors.
- **Data Exploration:**
  - Summarize key statistics (mean, median, mode, standard deviation).
  - Visualize data distributions (histograms, box plots).
  - Identify outliers and anomalies.

Part 2: Identify Target Property Types

- **Analyze Property Types:**
  - Categorize properties based on size, room type, and amenities.
  - Identify the most profitable property types.
  - Consider factors like demand, occupancy rates, and average daily rates.

Part 3: Calculate Occupancy Rates

- **Calculate Occupancy Rate:**
  - Determine the percentage of days a property is booked.
  - Analyze occupancy rates by property type, location, and seasonality.

Part 4: Estimate Revenue for Investment Properties

- **Revenue Estimation:**
  - Calculate potential revenue based on average daily rates, occupancy rates, and operating costs.
  - Consider factors like cleaning fees, property taxes, and insurance.

Part 5: Identify Key Attributes for Vacation Rentals

- **Attribute Analysis:**
  - Determine which amenities and features are most valued by guests.
  - Analyze the impact of location, neighborhood, and proximity to attractions.

Part 6: Documentation and Visualization

- **Data Visualization:**

- ○ Create clear and informative visualizations (charts, graphs, maps).
  - ○ Use data visualization tools (e.g., Tableau, Power BI, Python libraries).
- **Report Writing:**
  - ○ Summarize findings and insights.
  - ○ Present recommendations for investment decisions.
  - ○ Use clear and concise language.

Technical Skills:

- Data cleaning and preprocessing
- Data analysis and visualization
- Statistical analysis

By completing this project, I gained valuable experience in data analysis, real estate market analysis, and business decision-making.