NYC Airbnb Case Study Deep- Dive/Insights
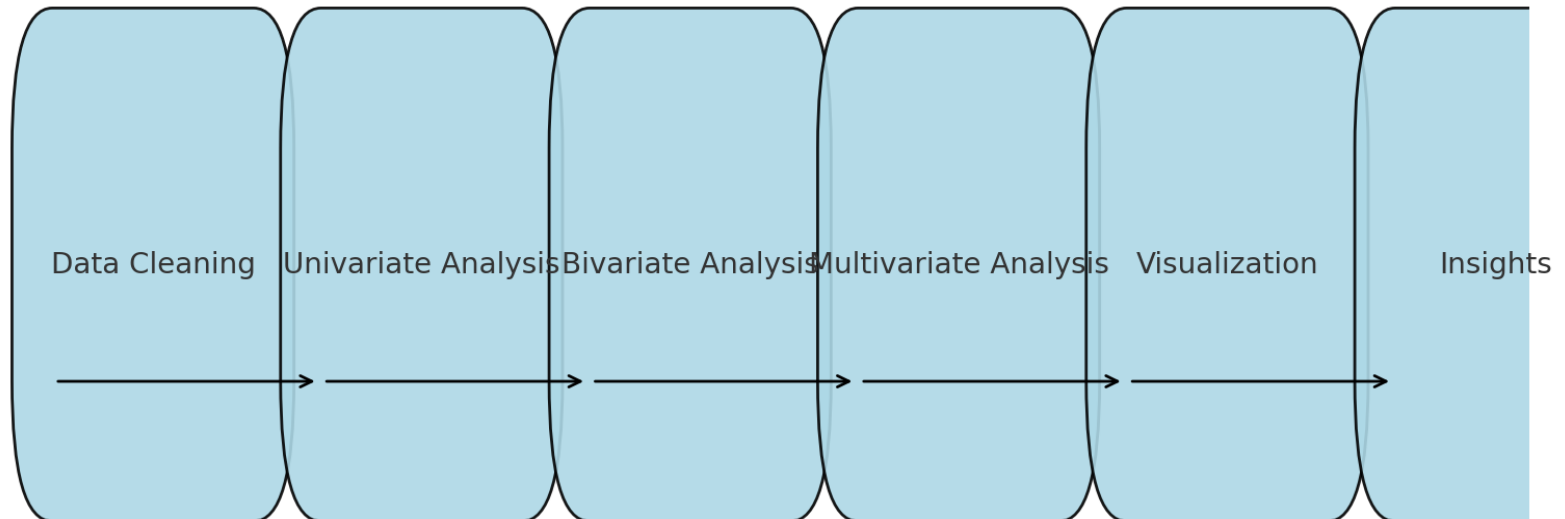
Presentation - I

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Agenda

- Objective
- Overview of the Dataset
- Exploratory Data Analysis (EDA)
- Insights and Analysis
- Conclusion

EDA Steps Flowchart

Data Cleaning → Univariate Analysis → Bivariate Analysis → Multivariate Analysis → Visualization → Insights

Objective

- Understand the Airbnb market in NYC
- Identify key factors influencing occupancy and pricing
- Provide actionable insights to increase revenue

<u>Overview of the Dataset</u>

- The dataset contains information about Airbnb listings in New York City, including details about hosts, locations, prices, and various other attributes. Our analysis focuses on extracting key insights to help increase revenue.

Exploratory Data Analysis (EDA) Steps

- Data Cleaning: Handling missing values, duplicates, and feature creation

- Exploratory Data Analysis: Univariate, Bivariate, and Multivariate analysis

- Data Visualization: Using plots to uncover patterns and trends

- Insights: Drawing meaningful conclusions from the analysis
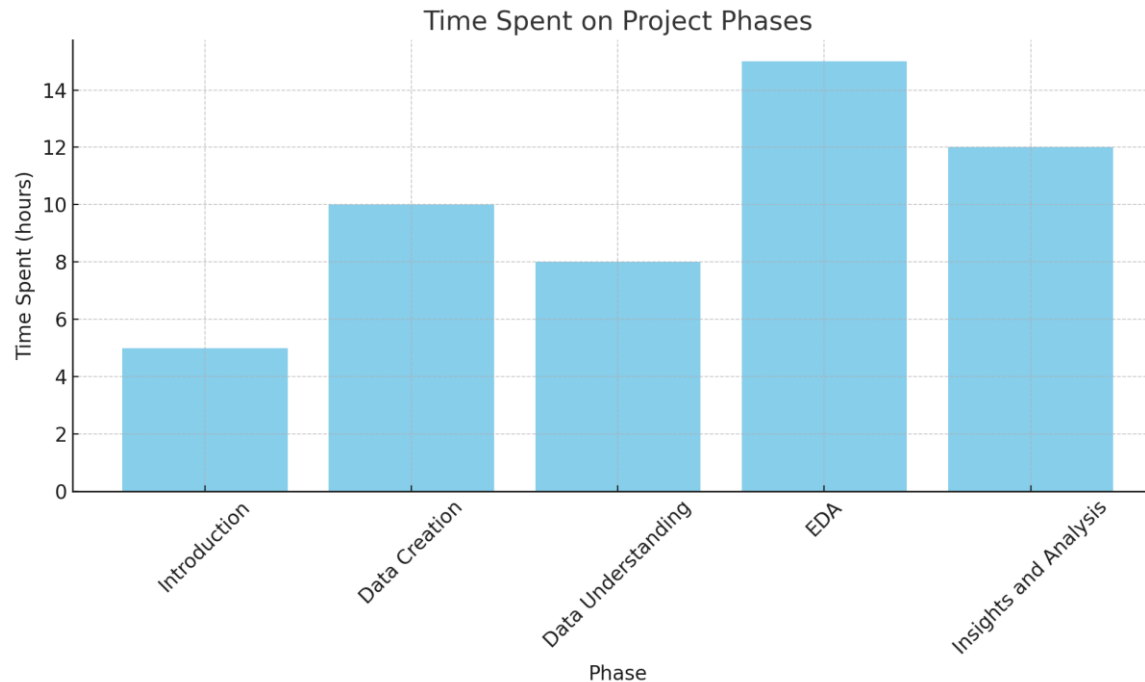
Occupancy Rates

- Occupancy rates vary across different neighborhoods and seasons. Identifying
- high and low occupancy periods can help in strategizing pricing and marketing efforts.

Median Price by Neighborhood Group
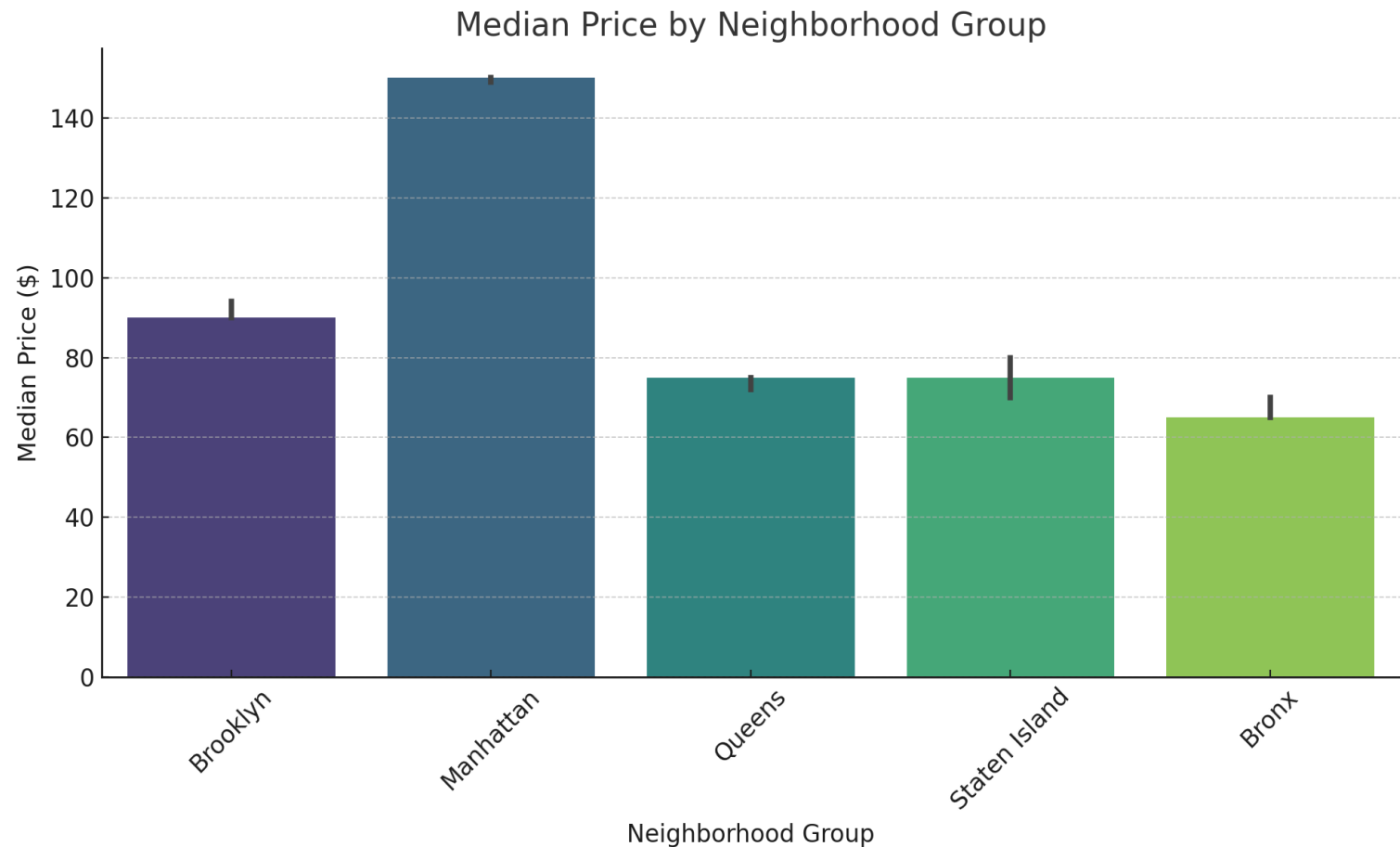
Occupancy Rates:

Insight: Occupancy rates vary significantly across different neighborhoods and seasons in New York City.

Action: Focus marketing efforts during low-occupancy periods to boost bookings.

Pricing Strategies

- Optimal pricing strategies are crucial for maximizing bookings.
- Analysis shows that pricing varies significantly across neighborhoods.

Median Price by Neighborhood Group
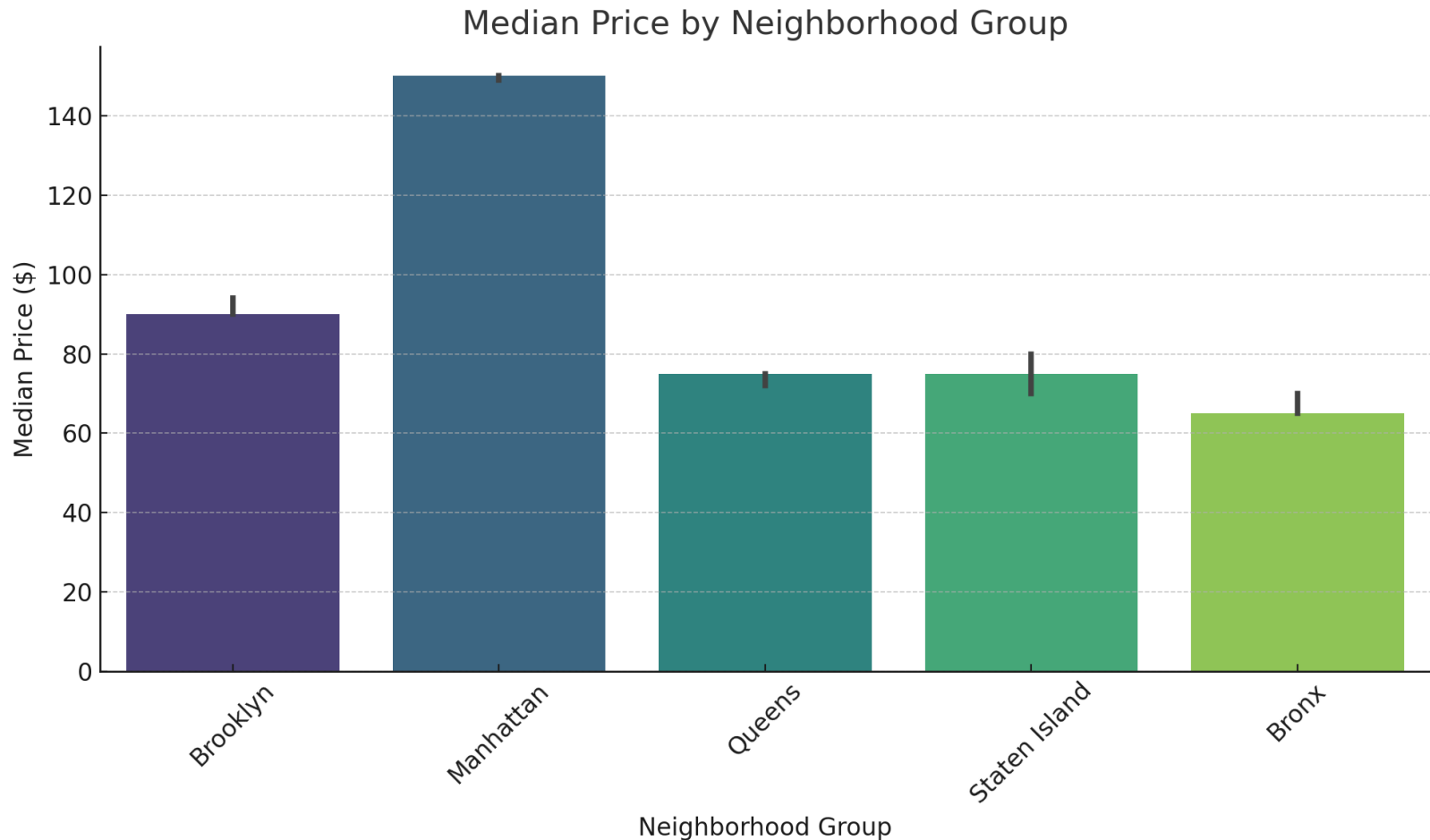
Pricing Strategies:

Insight: Pricing strategies are crucial for maximizing bookings, with significant variation across neighborhoods.
Action: Implement dynamic pricing strategies based on neighborhood trends and demand patterns.

Guest Preferences

- Guests have varied preferences based on booking patterns and property reviews.
- Understanding these preferences can help in tailoring offerings.

Number of Listings by Room Type
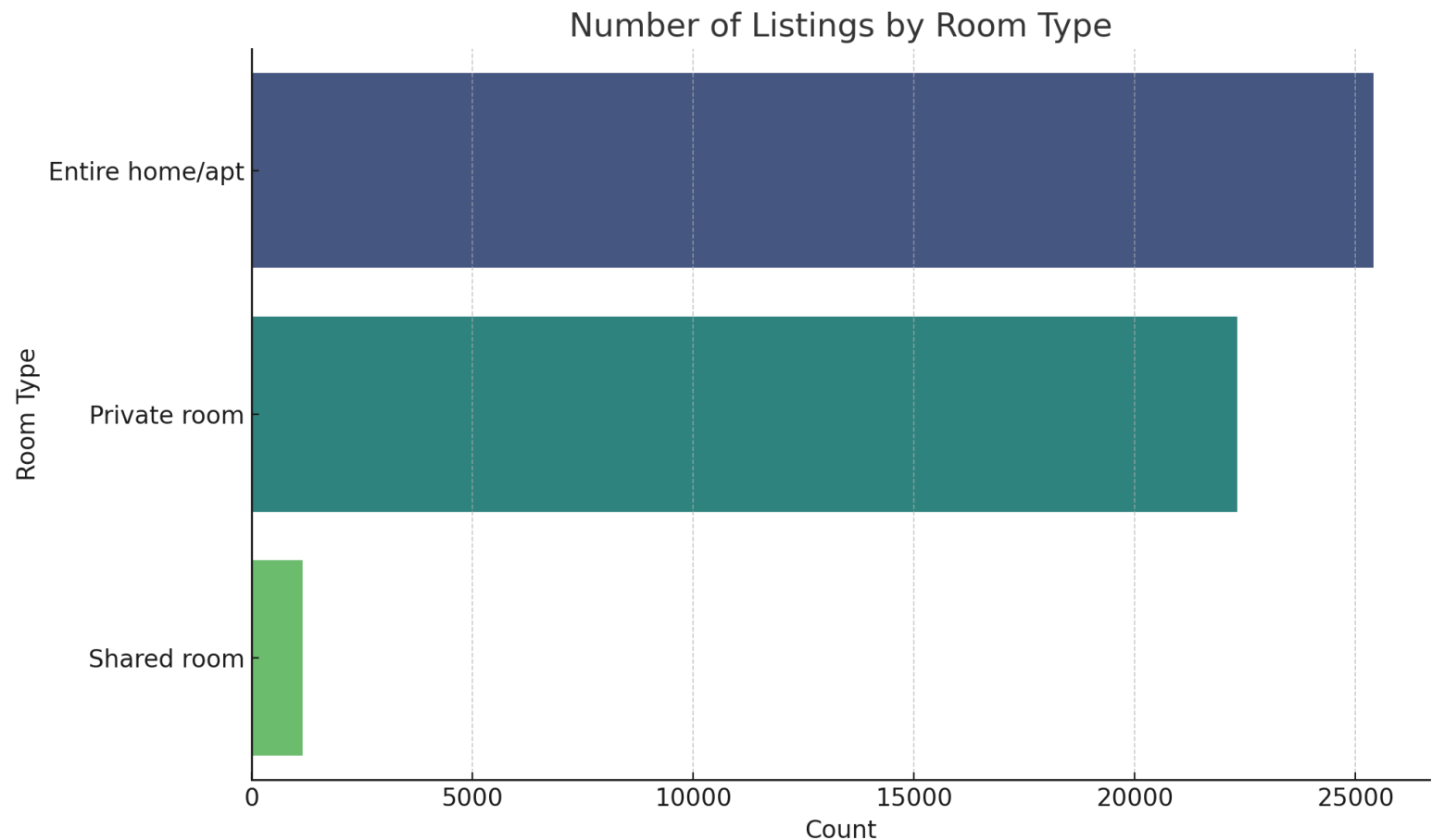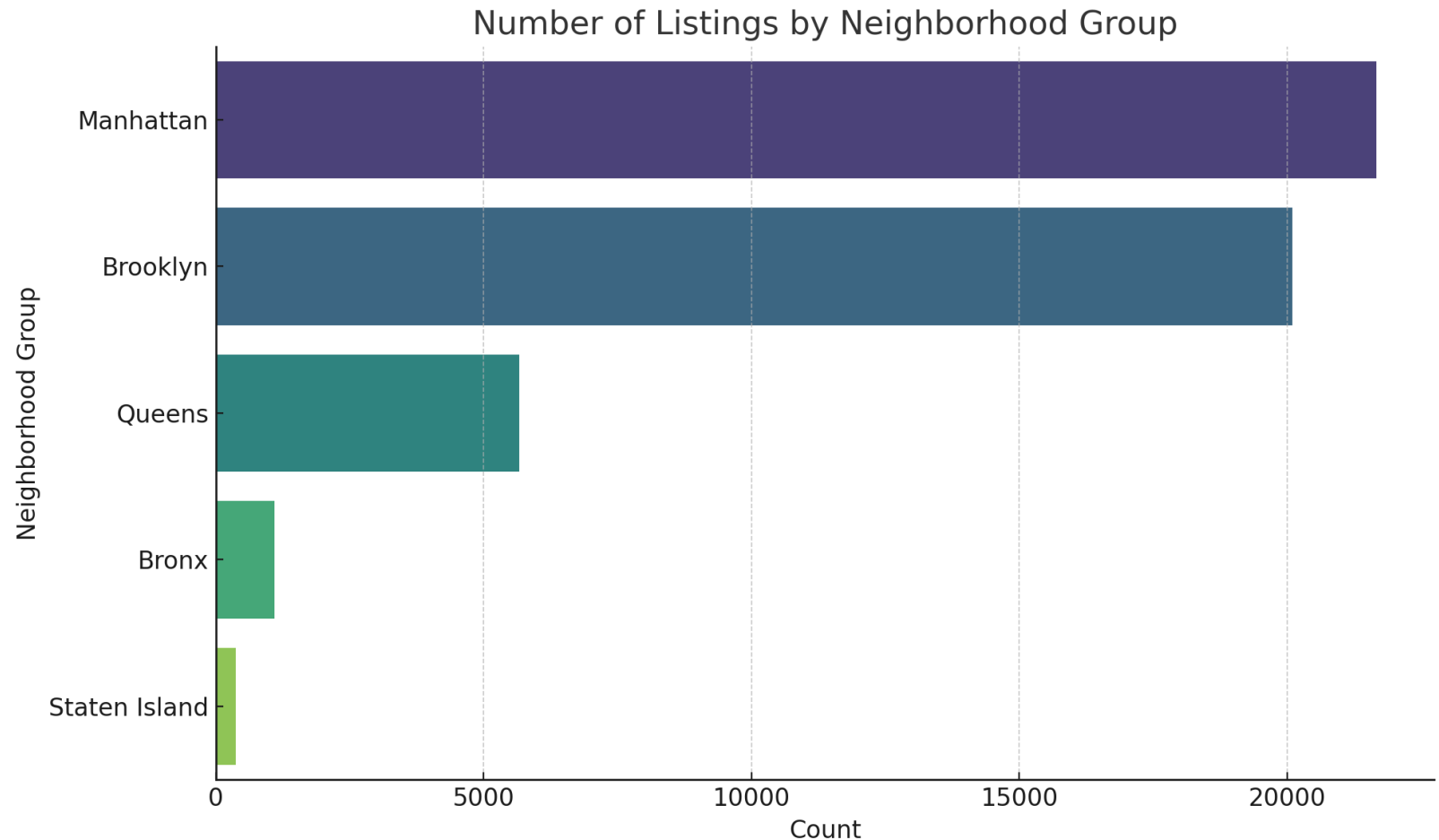
Guest Preferences:

Insight: Guests have varied preferences that can be identified through booking patterns and property reviews.

Action: Tailor property offerings to meet common preferences such as desired amenities and property types.
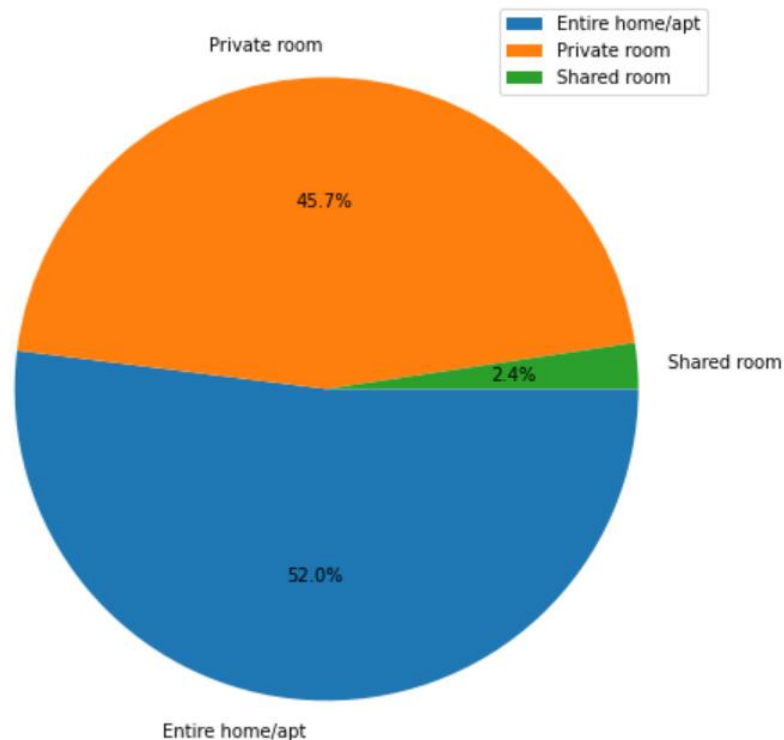
Neighborhood Analysis

- Some neighborhoods are more popular than others.
- Identifying these areas can help in targeting new hosts and properties.

Number of Listings by Neighborhood Group

Neighborhood Analysis:

Insight: Certain neighborhoods are more popular, indicating higher demand and occupancy.

Action: Target popular neighborhoods for acquiring new properties and enhancing existing listings.
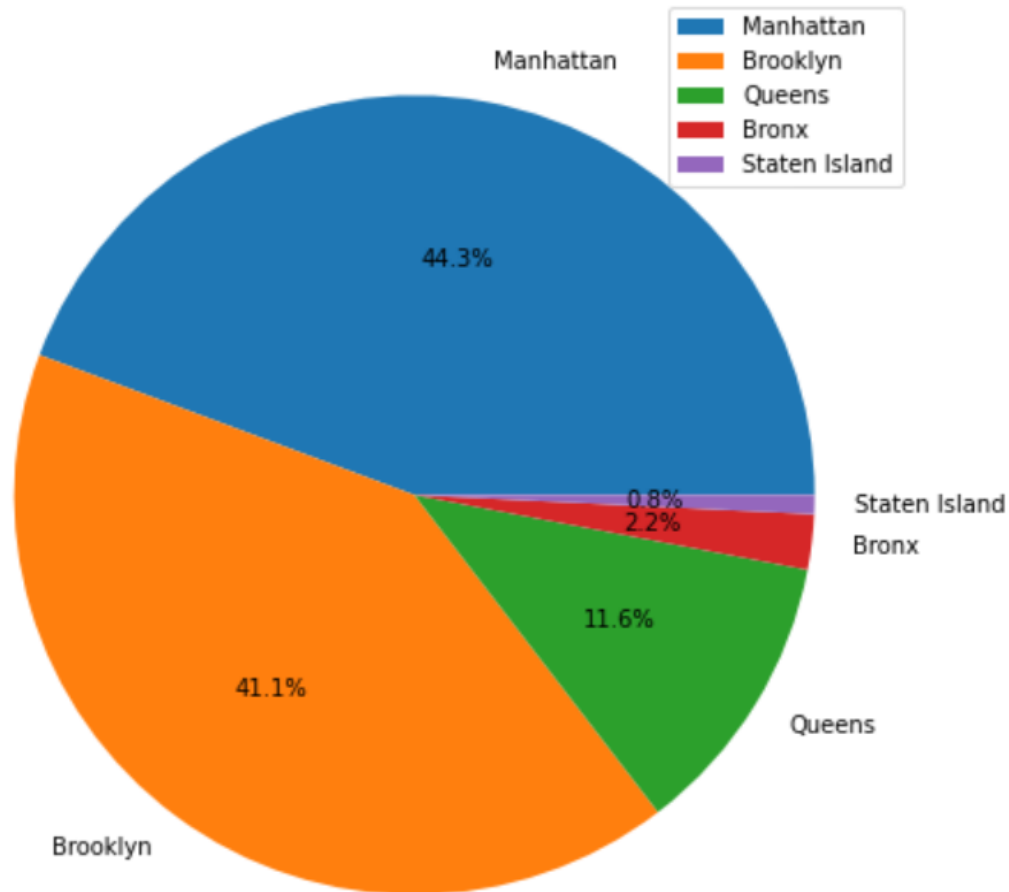
Customer Preferences

- Understanding customer preferences is key to optimizing property listings.
- Analyzing guest reviews and booking patterns can help in making data-driven adjustments.

Reviews per Month by Neighborhood Group
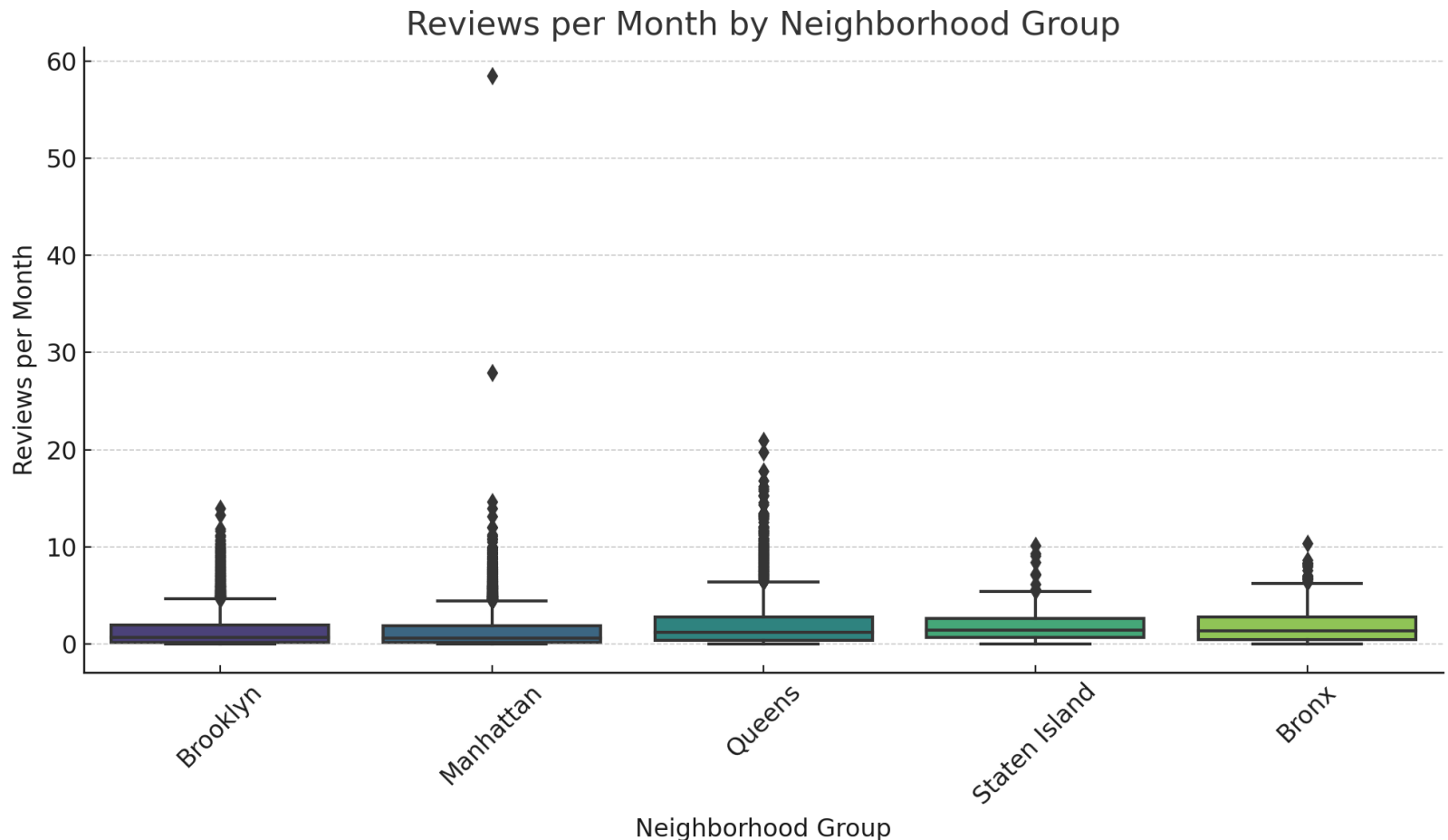
Customer Preferences:

Insight: Understanding guest reviews and booking behaviors can help improve customer satisfaction.
Action: Use guest feedback to make data-driven adjustments to properties and services.

Visualizations

- Visualizations play a key role in understanding the data.
- Here are some visualizations to support our insights.

Occupancy Rates by Neighborhood
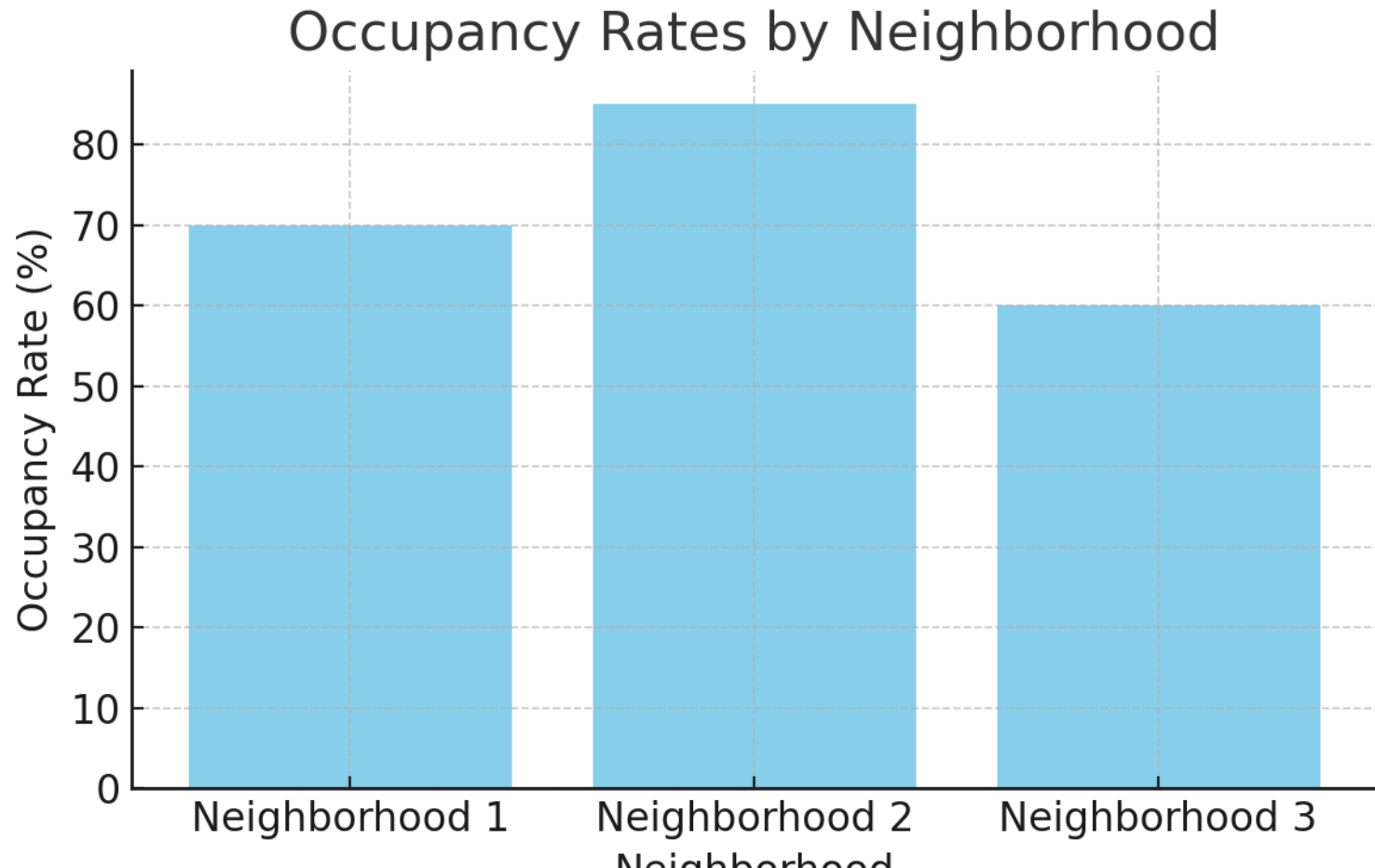
Visualizations:

- **High Occupancy in Neighborhood 2:**
- Neighborhood 2 has the highest occupancy rate.
- <mark>Action</mark>: Acquire more properties in this high-demand area.

- **Moderate Occupancy in Neighborhood 1:**
- Neighborhood 1 shows a stable occupancy rate.
- <mark>Action</mark>: Maintain and potentially expand listings in this area.

- **Low Occupancy in Neighborhood 3:**
- Neighborhood 3 has the lowest occupancy rate.
- <mark>Action</mark>: Implement strategies to boost occupancy, such as targeted marketing or competitive pricing.

Conclusion

- Focus on acquiring new hosts in high-demand neighborhoods to increase listings and revenue.

- Optimize property listings based on detailed analysis of customer preferences and feedback.

- Develop targeted strategies to increase traction for less popular properties, such as offering discounts or highlighting unique features.

Appendix

Methodology:
- Data Creation and Understanding
- Data Manipulation/EDA
- Missing Value Analysis
- Univariate Analysis
- Bivariate Analysis
- Insight Generation

Please refer detailed Methodology document here:
Methodology.docx

Thank you!

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