Presentation I
Airbnb NYC Data Analysis

Presentation I for Data Analysis Managers & Lead Data Analyst

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Objective & Agenda

- Objective: Perform in-depth analysis to uncover trends & insights

- Agenda:
  - Data Cleaning & Processing
  - Exploratory Data Analysis
  - Key Findings
  - Recommendations

Data Cleaning & Preprocessing

- **Missing Values:** Handled nulls in reviews, last_review, price outliers

- **Data Transformation:** Converted categorical variables, standardized formats

- **Outlier Detection:** Identified & treated extreme pricing anomalies

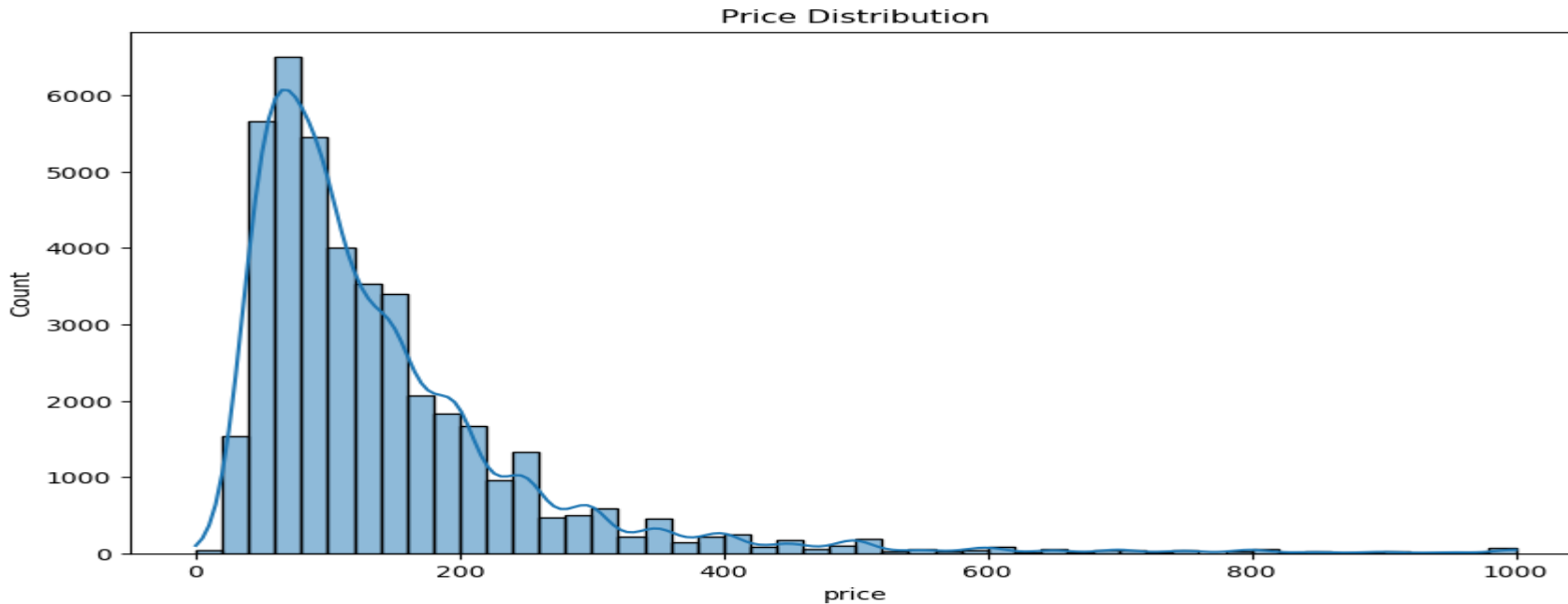# Outlier detection

- **Price and minimum_nights columns had some unusual high values.**

- **Used boxplot to detect and treat outliers**

Boxplot of Price

Boxplot of minimum_nights
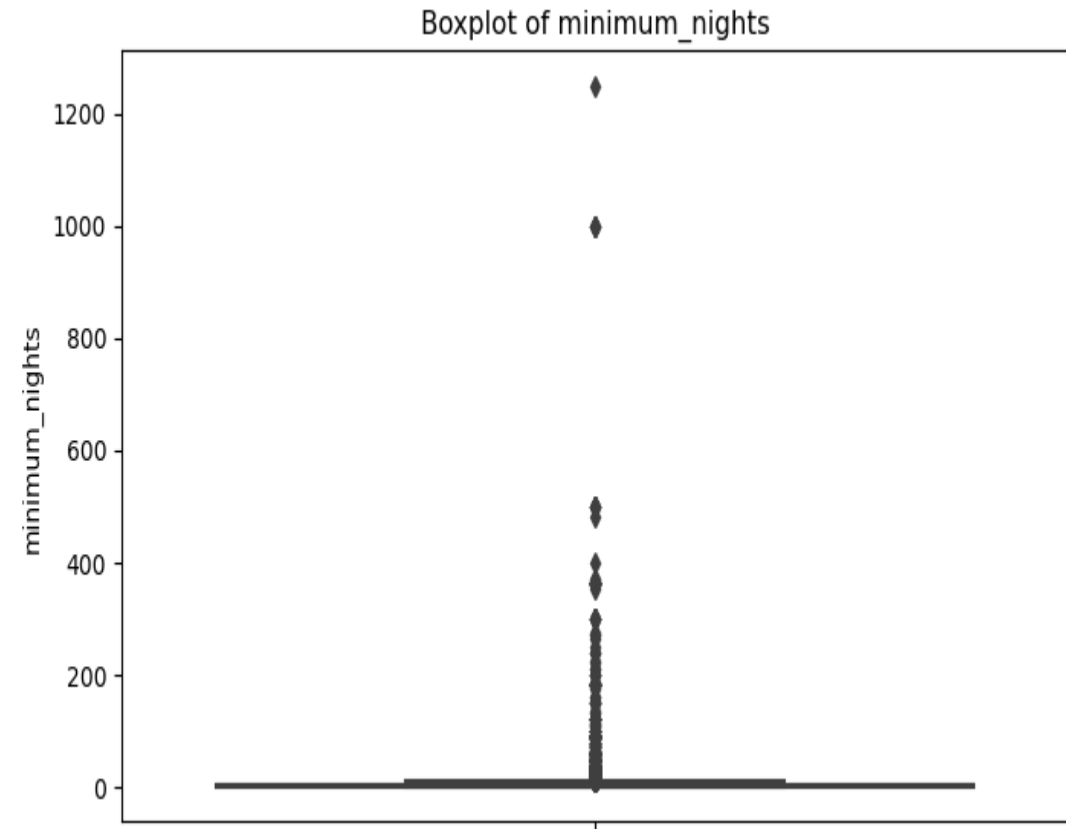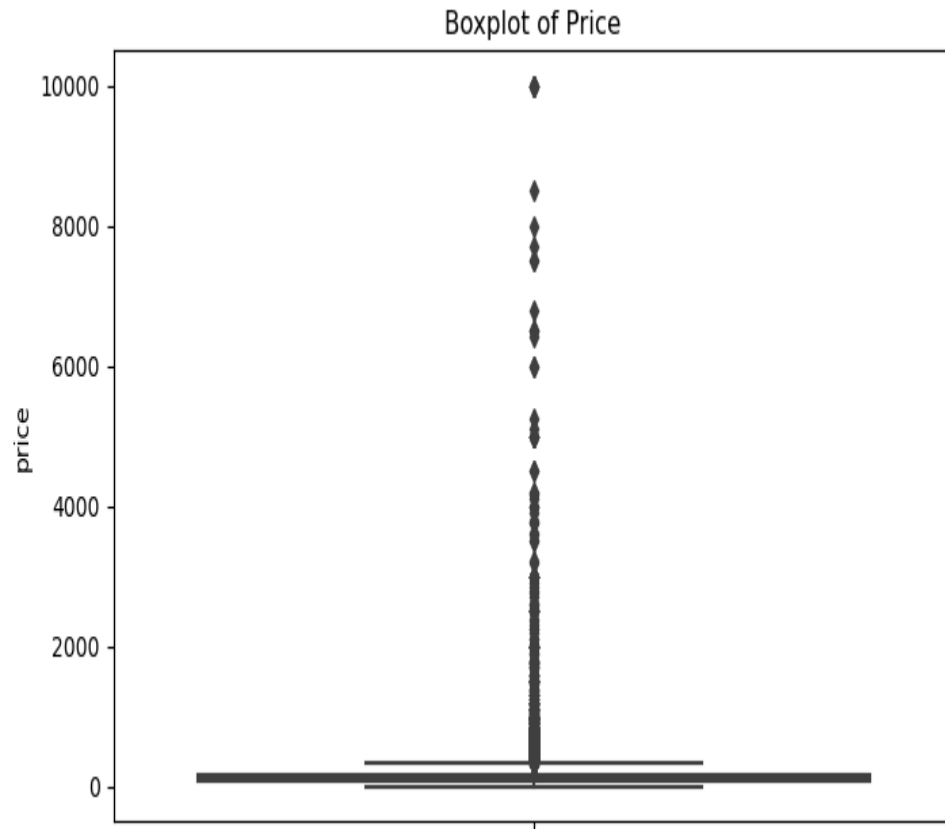
Price Distribution & Trends

• Most listings priced between $50-$200 per night

• Luxury stays ($500+) are a niche segment

• Pricing varies by borough & property type

Price Distribution

Room Type & Availability Insights

- **Entire homes dominate the market (~50%)**

- **Private rooms preferred for affordability (~47%)**

- **Listings with 200+ availability days generate higher revenue**

Distribution of Room Types in NYC Airbnb Listings
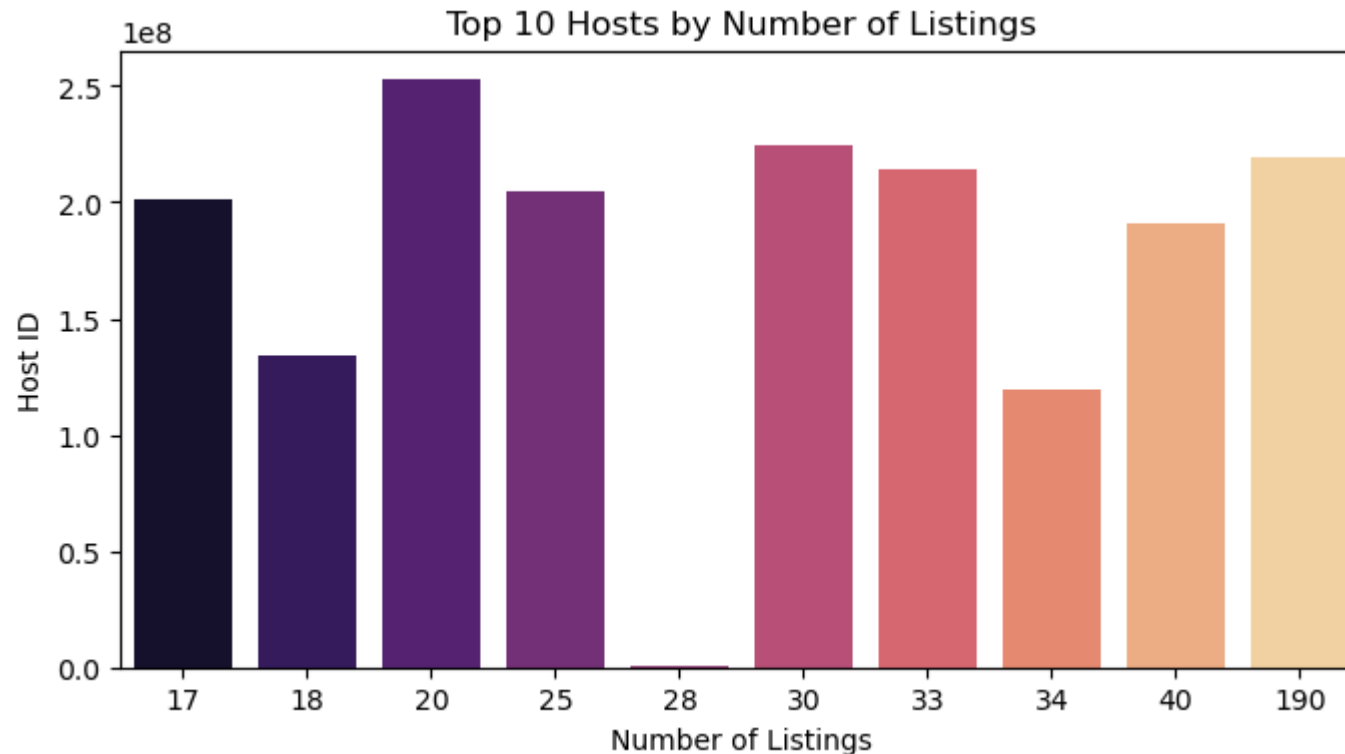
Shared room — 2.4%

Private room — 47.8%

Entire home/apt — 49.8%
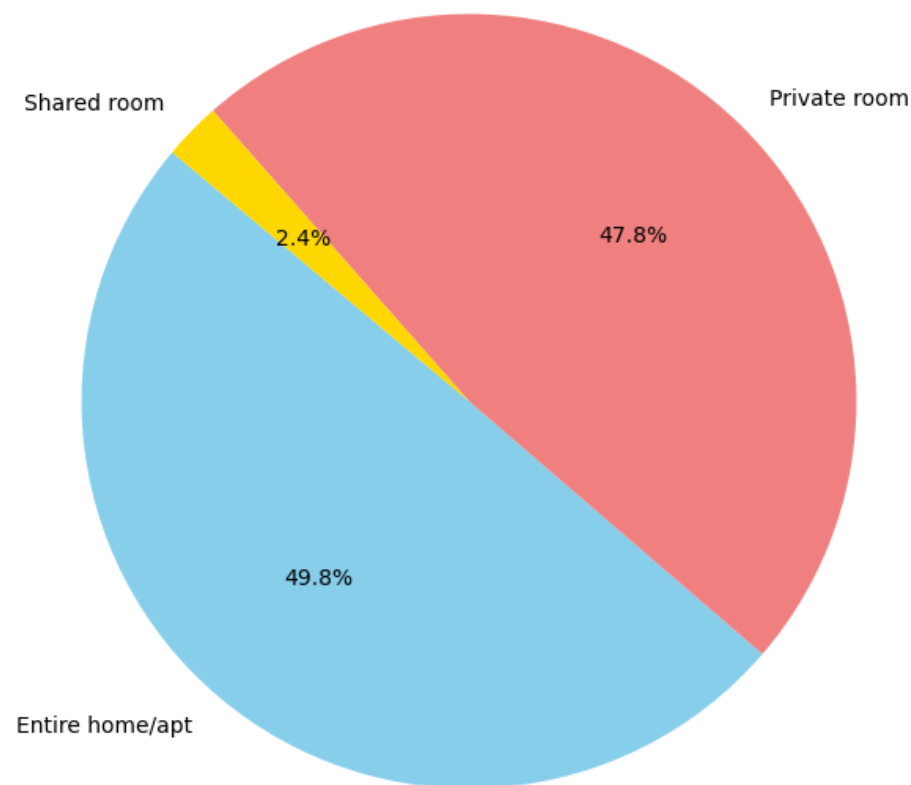
Neighborhood Analysis

- **Manhattan & Brooklyn have the most listings**

- **Queens rising as a budget-friendly alternative**

- **Bronx & Staten Island have growth potential**
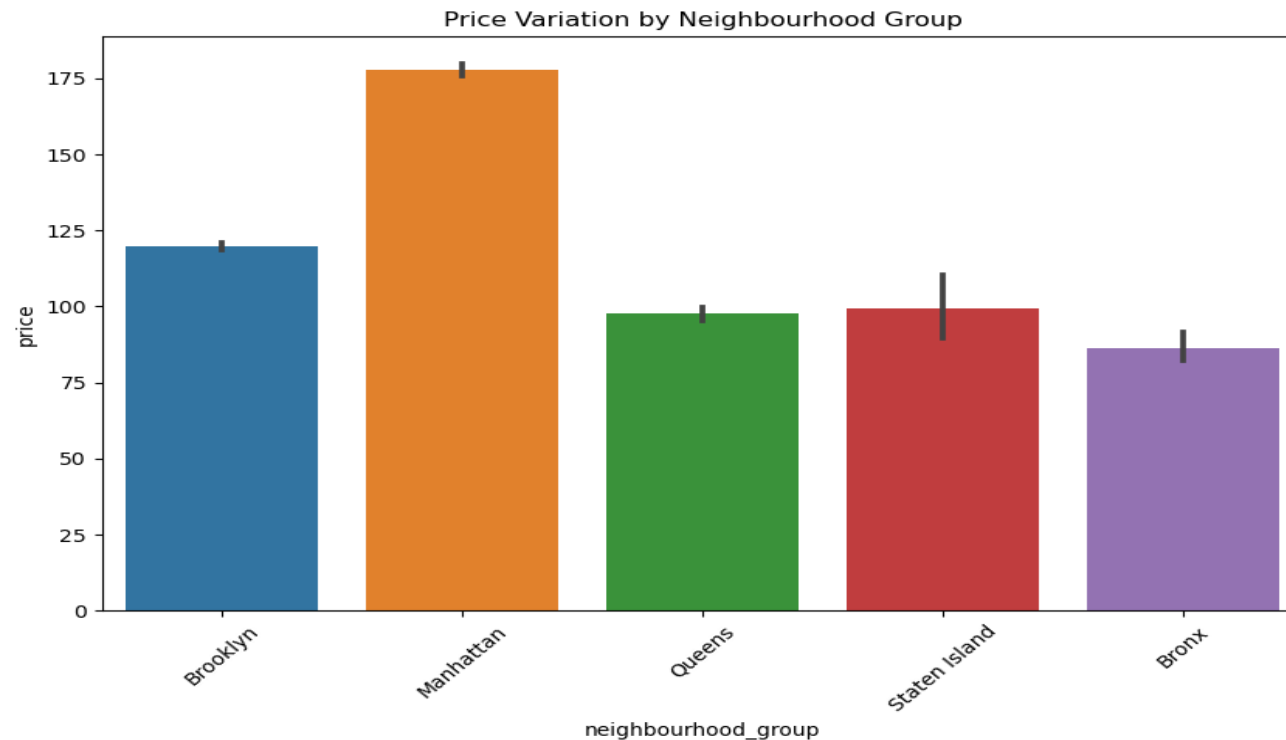
Host Analysis & Strategy

- **Large operators manage 100+ listings**

- **Majority of hosts own 1-5 properties**

- **Encouraging single-property hosts to scale up**

Key Takeaways & Next Steps

- Expand mid-range listings to meet customer demand

- Optimize pricing in competitive neighborhoods

- Encourage underutilized hosts to improve availability

- Enhance engagement for low-visibility properties

Appendix

- Methodology Document.docx