

Airbnb Price and Demand Analysis

1. Introduction

This report presents an analysis of Airbnb listings data with the objective of understanding the key factors that affect price and demand.

2. Exploratory Data Analysis

The EDA involved analyzing various features such as location, room type, number of reviews, and availability. Correlation and distribution plots were used to identify trends and outliers.

3. Price Prediction

Machine learning models such as Linear Regression, Random Forest, and XGBoost were employed to predict the price of listings. Feature engineering was applied to improve model accuracy.

4. Demand Analysis

Demand patterns were examined using metrics like review frequency and availability. Seasonal trends and geographic distribution of demand were also analyzed.

5. Conclusion

Key insights were derived to help hosts optimize their pricing strategy. Future work includes sentiment analysis from reviews and deploying a real-time dashboard.