

PROJECT NAME: Airbnb Listings Data EDA

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Problem Statement

In the context of Airbnb operations, how can the utilisation of PowerBI facilitate a comprehensive comparative examination between Chicago and New Orleans, two diverse urban environments? This inquiry seeks to leverage PowerBI's visual analytics capabilities to uncover and illustrate the shared attributes, disparities, and distinctive patterns inherent to Airbnb's presence in these cities, thus elevating the depth and insightfulness of the study.

Project Introduction

This project analyzes Airbnb listings in **Chicago** and **New Orleans** to compare market dynamics, pricing trends, property distribution, and host performance between the two cities. Using cleaned and transformed datasets in **Power BI**, the study explores key aspects such as neighborhood popularity, property types, pricing variations, and customer engagement through reviews. The objective is to uncover shared patterns, highlight differences, and provide actionable insights for optimizing Airbnb operations in diverse urban environments.

GITHUB LINK: <https://github.com/Joysurya98/Airbnb-Listings-Data-EDA-Using-PowerBI->


Airbnb Statistical Summary - Chicago vs New Orleans

Total Hosts

2064

Total Listings

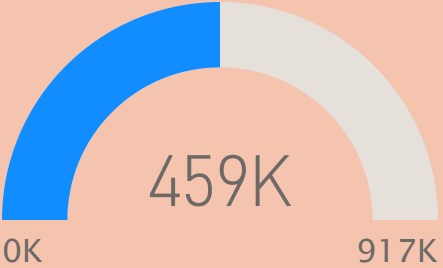
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Slicer - Choose the City 

☒ Chicago

☐ New Orleans

Total Reviews (Overall)



Total City
Neighbourhoods

76

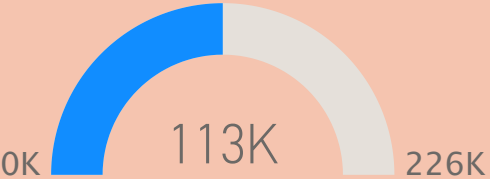
Parameters:

Price

Property

Host

Total Reviews (Last Year)



Rent Price(Overall
Average)

654.15

DATA INSIGHTS:

- Chicago has more neighborhoods than New Orleans which results in more number of hosts and Airbnb properties being present in the city of Chicago.
- Customer reviews in Chicago are clearly higher by 20k+ than New Orleans within the last year. This suggests a bigger customer base using Airbnb services in Chicago.

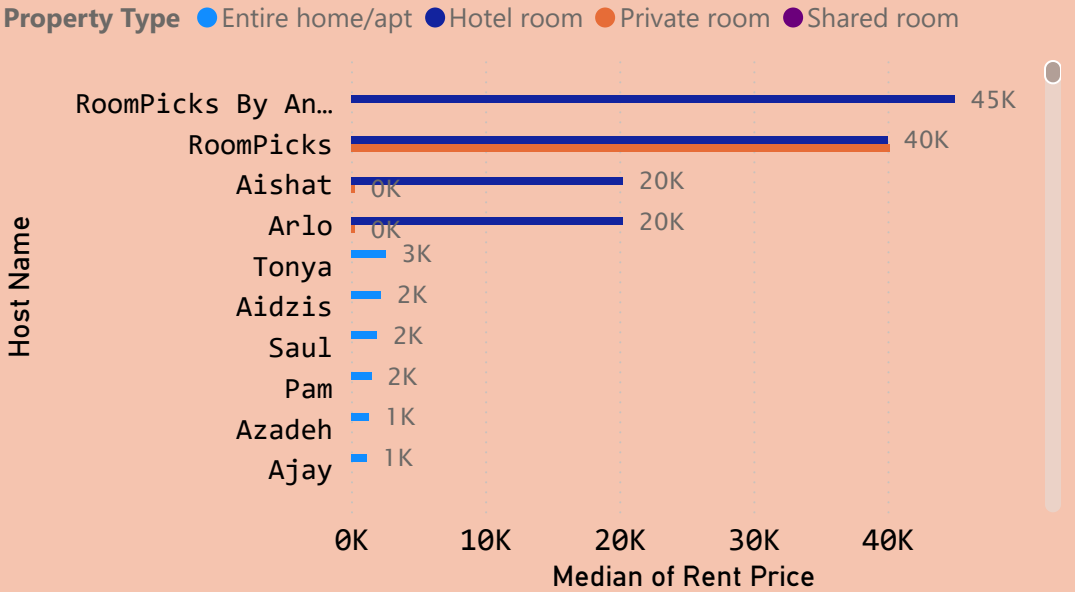
Price Analysis

City

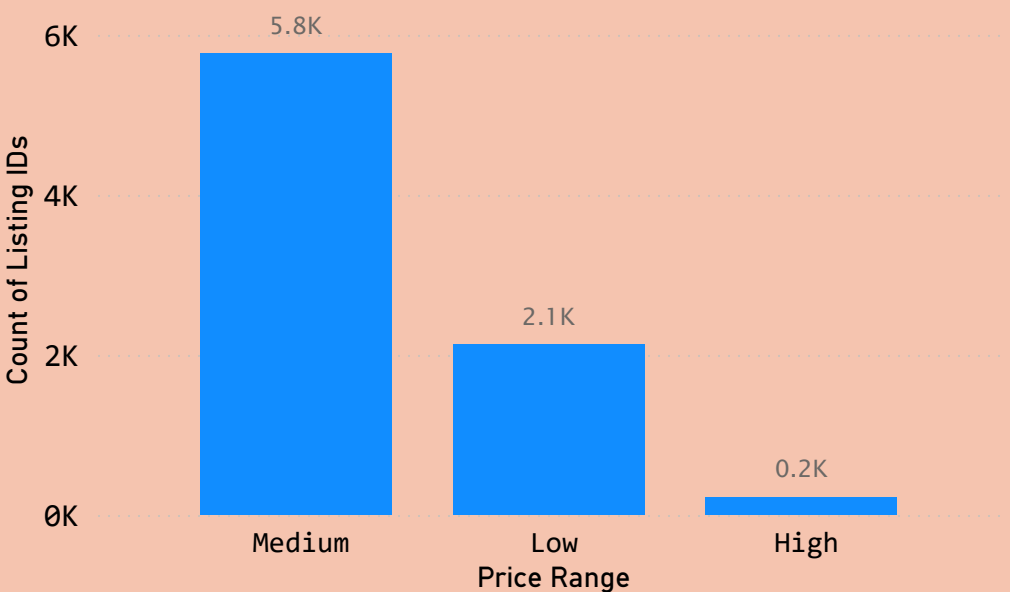
Chicago

New Orleans

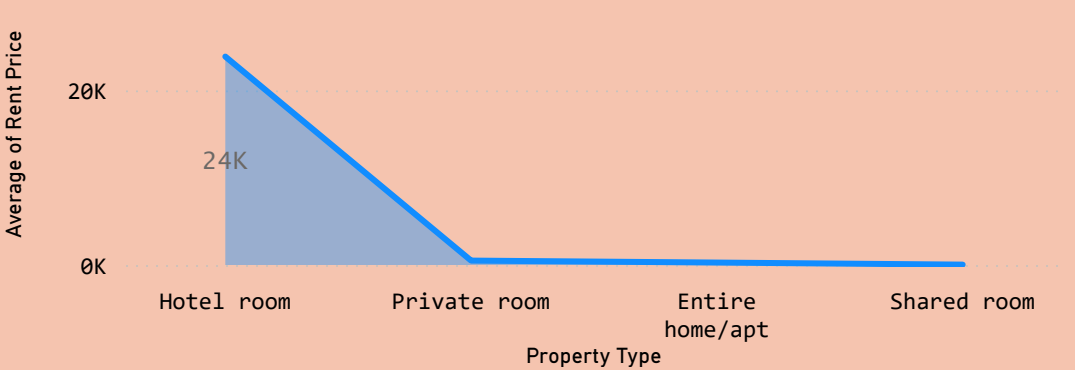
Host - Rent Prices (Median)



Count of Listing IDs by Price Range



Average of Rent Price by Property Type



DATA INSIGHTS:

- Hotel Room type properties has a significantly higher average room rent due to the presence of costly hotels in both the areas.
- Property listings have a high number of medium range (100-1000) priced Airbnb properties. This suggests customers prefer affordable stay with good services

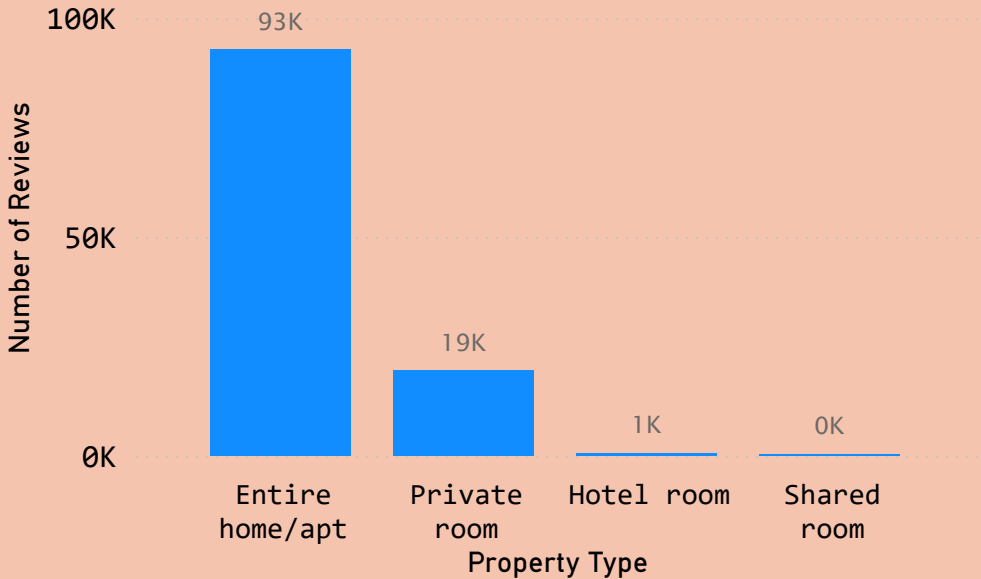
Property Analysis

City

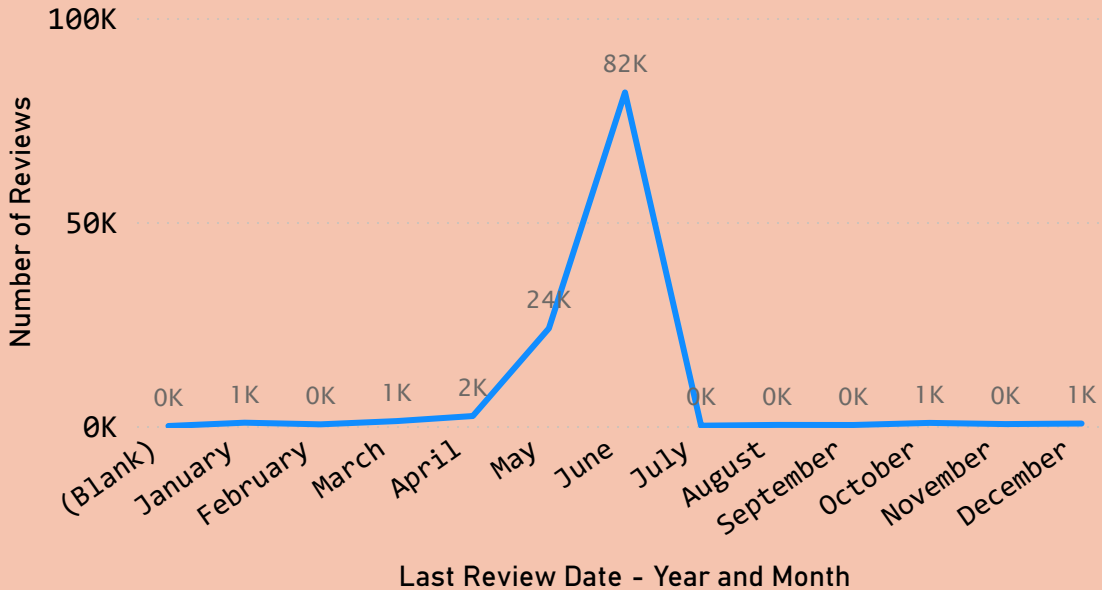
Chicago

New Orleans

Most Reviewed Property Types



Recent Months with Most Customer Reviews



Maximum Average Review per month - June

5.52

DATA INSIGHTS:

- Customers have a clear preference to stay in home/apartment type properties because of affordability and comfort.
- Services have a seasonal hike as observed by the peak with customer reviews pouring in starting from April till August with June having the highest business numbers

Property Analysis

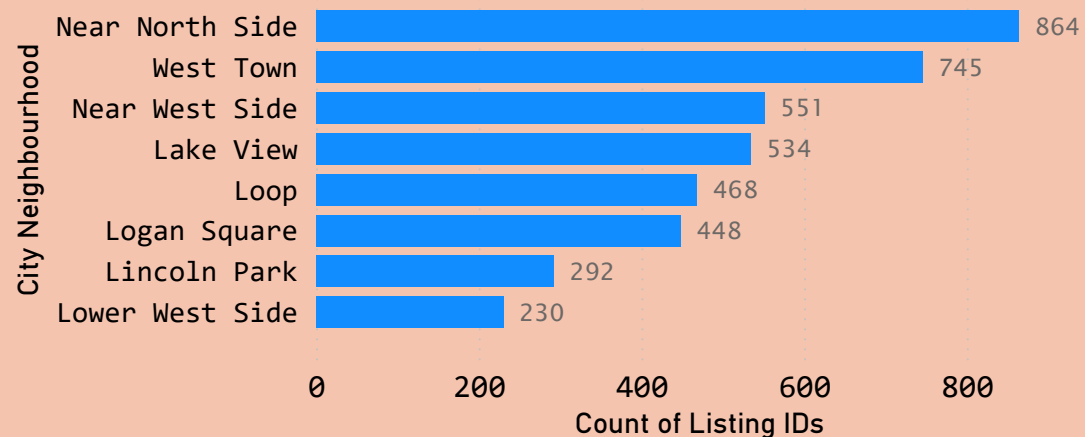
City

Chicago

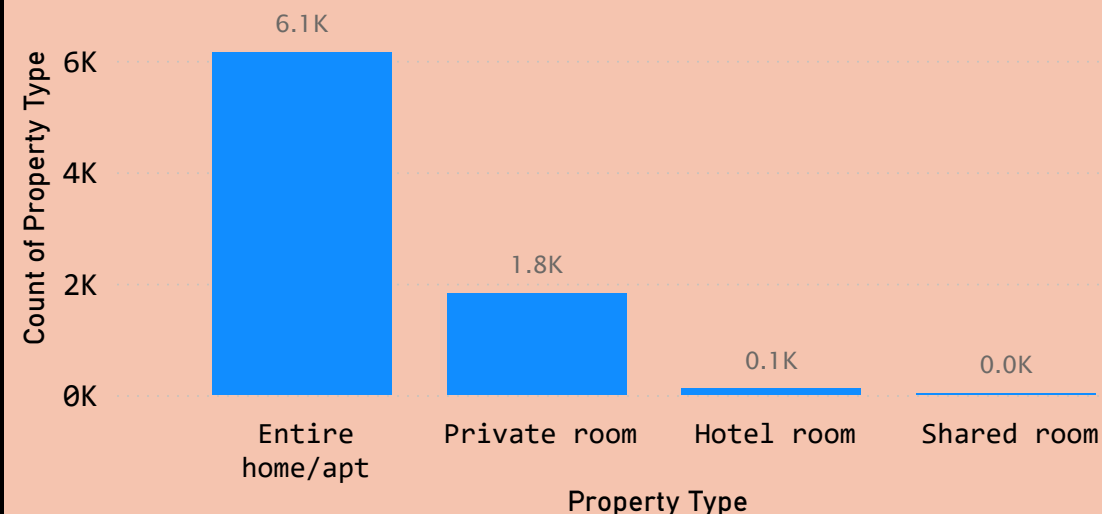
New Orleans

Count of Listing IDs by City Neighbourhood and City

City ● Chicago



Count of Property Type by Property Type



Minimum Nights Stay
(Median) At a Property

2

DATA INSIGHTS:

- Central Business District in New Orleans have the highest number properties across the two cities with a count of 1216. Chicago has a better consistency in the number of Airbnb properties inside the top 10 neighborhoods.
- Homes and Apartments see the highest visitor numbers and have over 6k listings in each city. Families and Couples prefer to stay in homes/apartments and private rooms for

Host Analysis

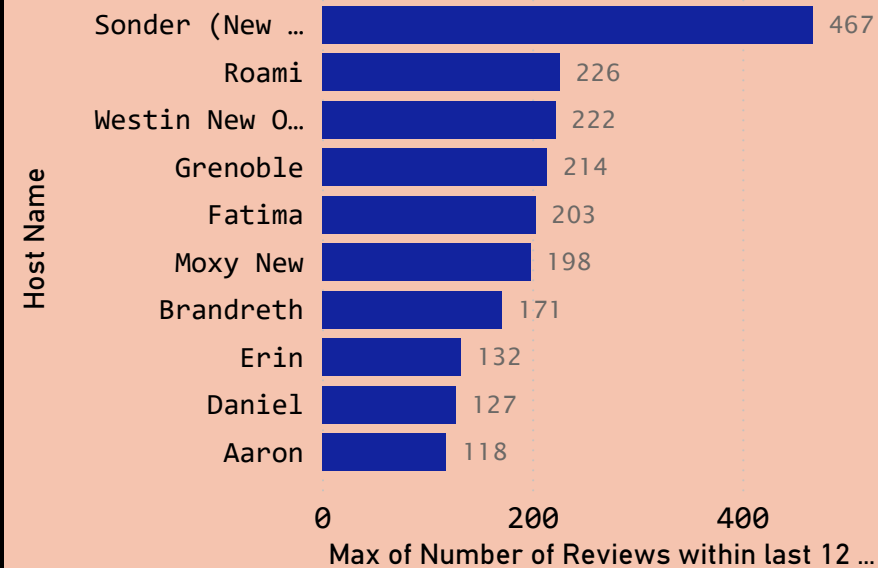
City

Chicago

New Orleans

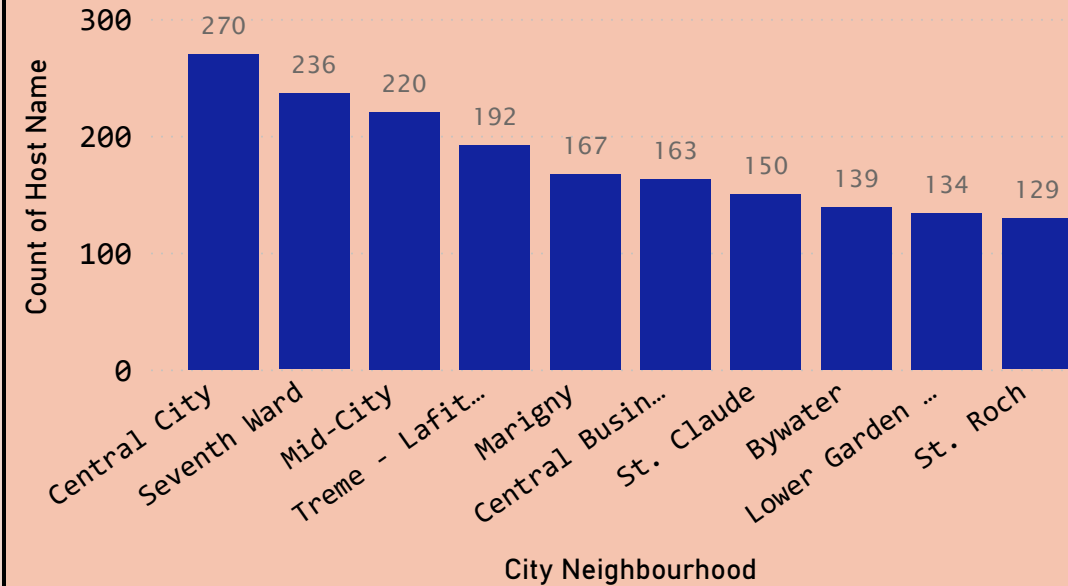
Top 10 Hosts with Highest User Reviews

City ● New Orleans



Neighbourhoods with Highest Number of Hosts

City ● New Orleans



DATA INSIGHTS:

- Similar number of hosts are present in neighborhoods across both the cities within a range of 150-250 mostly.
- Hosts receiving highest number of reviews from customers suggests high engagement and business revenue generation capabilities.

Host Analysis

Distribution of Airbnbs in Chicago and New Orleans

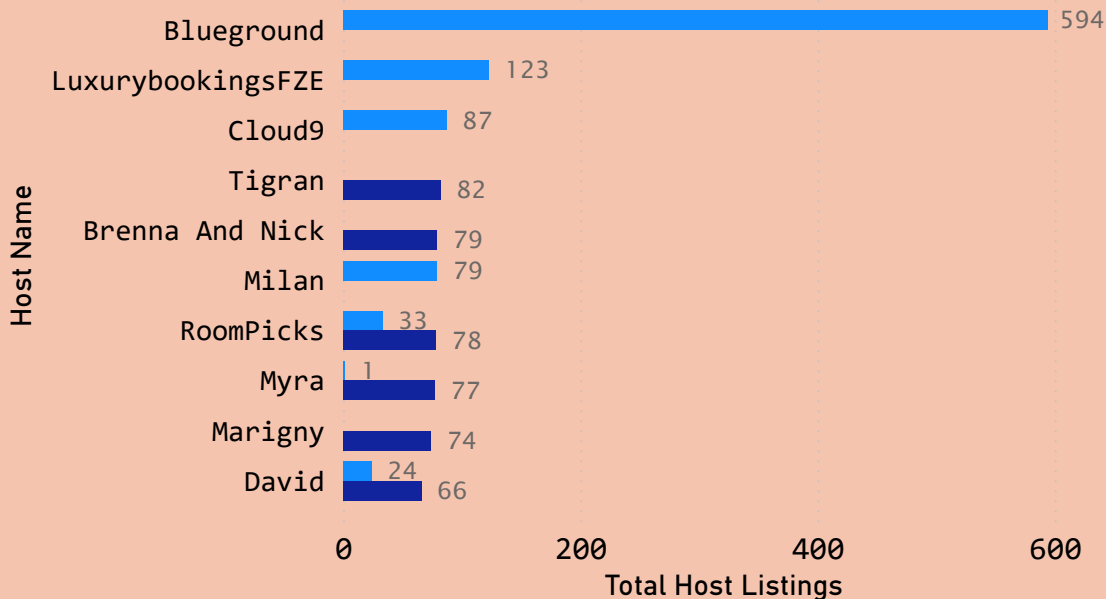
City

Chicago

New Orleans

Top 10 Hosts with Highest Listings

City ● Chicago ● New Orleans



DATA INSIGHTS:

- Host Blueground has the highest number of listed properties under Airbnb at 594 which is significantly high compared to other hosts.
- Top Hosts generally have 50-120 listed properties.
- A proper distribution of listings in both the cities is clearly depicted on the map.

CONCLUSIONS AND SUGGESTED ACTIONS:

- **Leverage Chicago's Demand:** With Chicago generating higher numbers both in terms of properties and customer engagement, optimizing the rent prices to generate higher revenues is a strategical option.
- **New Orleans Underrepresentation:** A detailed suggestive study on amenities and cultural factors that have created a comparatively weaker customer base in New Orleans has to be conducted.
- **Medium Price Range Expansion and Development:** With visitors having string preference for mid range homes and apartments, a smart business move is to expand and bring in more properties in this range under the Airbnb umbrella in the two cities for higher revenue generation.
- **Home/Apartment stay preference:** Customers prefer affordable homes and apartments for short and long stays. The company must prioritize comfortable and value-for-money service at a cheap price to attract more travelers and achieve good reviews.
- **Luxury Hotels:** With less number of luxury hotels it is clear customers are not willing to spend too much for basic services, A strong suggestion is to provide high quality luxurious services at this niche hotels to attract high end customers and strengthen their customer base.
- **Host Priorities:** Airbnb can collaborate with top hosts to understand customer demand in a deeper way and provide solutions and set rules that can be followed by new hosts starting off in the rental business.
- **Investment opportunities:** Airbnb can invest on hosts with maximum listings and customer engagement for facility improvements and introduce new policies to achieve exponential progress in the rental business on the two cities,