Zomato Data Analysis Project Report

Introduction

This project analyzes Zomato restaurant data to derive insights into customer preferences, service availability, and distribution. The analysis utilizes various data visualization techniques to present findings comprehensively.

Data Loading and Preprocessing

The dataset is loaded into a Pandas DataFrame for inspection and cleaning. Initial steps involve handling missing values and converting data types to ensure the dataset is suitable for analysis.

Exploratory Data Analysis (EDA)

1. Distribution of Ratings: The distribution of restaurants across different rating ranges helps identify common rating trends among restaurants.

2. Distribution of Votes: The distribution of the number of votes received by restaurants indicates their popularity and customer engagement.

3. Online Order and Book Table Services: The proportion of restaurants offering online ordering and table booking services highlights the adoption of these services across the dataset.

Categorical Analysis

1. Types of Restaurants: The distribution of different types of restaurants provides insights into common dining preferences.

2. Popular Cuisines: The popularity of various cuisines is highlighted, indicating the most common ones in the dataset.

3. Location-wise Analysis: Identifying the top 10 locations with the most restaurants offers a geographical perspective on restaurant density.

Heatmap Analysis

A pivot table with `listed_in(type)` as the index and `online_order` as columns counts occurrences. The resulting analysis suggests that clients prefer offline dining at restaurants and online ordering at cafes.

Conclusion

The analysis reveals several key insights:

- Rating Distribution: Most restaurants fall within certain rating ranges, indicating common trends in customer satisfaction.
- Votes Distribution: The number of votes varies significantly across restaurants, reflecting varying levels of customer engagement and popularity.
- Service Availability: Many restaurants offer online ordering and table booking services, indicating widespread adoption of these features.
- Restaurant Types and Cuisines: The distribution of restaurant types and popular cuisines highlights common dining preferences among customers.
- Location Distribution: The top 10 locations with the most restaurants provide a geographical perspective on restaurant density.
- Customer Preferences: The heatmap analysis indicates that customers prefer offline dining at traditional restaurants while favoring online ordering at cafes.

End-User Implications

For Zomato, these insights can inform strategies to improve service offerings, enhance customer experience, and tailor marketing efforts based on restaurant types and customer preferences. Understanding these trends can help Zomato better cater to the needs and preferences of its customers, ultimately driving business growth and customer satisfaction.