■ Exploratory Data Analysis Report on Zomato Bangalore Restaurants Dataset

1. Objective

The goal of this exploratory data analysis (EDA) is to analyze the Zomato Bangalore restaurants dataset to extract meaningful insights about customer preferences, popular restaurant types, cost distribution, and cuisine trends. The analysis aims to understand the structure and patterns in Bangalore's restaurant market.

2. Data Cleaning & Preprocessing

• Dropped irrelevant columns: url, address, phone, menu_item, dish_liked, reviews_list.
• Removed duplicate records to enhance data quality.
• Cleaned the 'rate' column by removing values like 'NEW', '-' and '/5', converted to numeric, and filled missing values with the mean.
• Dropped null values for simplicity.
• Renamed columns for clarity: e.g., approx_cost(for two people) → Costfor_2.
• Converted cost values with commas into floats for numerical analysis.

3. Feature Engineering & Aggregation

• Grouped less common restaurant types (<1000 occurrences) into category 'others'.
• Consolidated less frequent locations (<300 restaurants) into 'others'.
• Grouped cuisines with fewer than 100 listings under 'others'.
• Dropped 'listed_in(city)' column due to redundancy.

4. Insights & Analysis

• Quick Bites and Casual Dining emerged as the most popular restaurant types.
• Major hotspots include BTM, Koramangala, and Whitefield.
• Most restaurants target affordable segments, with an average cost for two.
• North Indian, Chinese, and South Indian cuisines dominate the market.
• Ratings mostly cluster around the mean; very low or very high ratings are rare.

5. Visualizations

Visuals created include:
• Count plots by location and restaurant type.
• Cost distribution histograms and boxplots.
• Bar charts for cuisine trends.
• Pie charts highlighting location and type shares.
These visuals help illustrate customer preferences and market distribution.

6. Summary

This EDA converted raw, messy data into clean, structured insights, revealing that Bangalore's dining scene heavily favors casual and affordable restaurants, with specific cuisines and areas

dominating the market.

7. Recommendations

• Develop predictive models (e.g., predicting ratings based on cost, location, or cuisine).
• Incorporate temporal analysis if date-based data becomes available.
• Extend analysis to other cities to identify comparative patterns and trends.

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