

Swiggy Restaurant Data Analysis Report

1. Dataset Description

1.1 Source:

The dataset used for this project is `swiggy_all_menus_india.csv`, sourced from Kaggle. It contains information about 1,000 dishes listed on Swiggy across multiple cities.

1.2 Columns:

- State: State where the restaurant is located
- City: City where the restaurant is located
- Restaurant Name: Name of the restaurant
- Location: Specific area/location of the restaurant
- Category: Food category (e.g., Recommended, Snacks, Desserts)
- Dish Name: Name of the dish
- Price (INR): Price of the dish in Indian Rupees
- Rating: Customer rating (0.0 - 5.0)
- Rating Count: Number of customer ratings

1.3 Data Quality:

The dataset is clean, consistent, and contains no missing values. It has balanced representation across cities, categories, and restaurants.

2. Operations Performed

- Created a Spark session and loaded the dataset.
- Verified schema and previewed sample records using `.show()`.
- Inspected columns such as Price and Rating to analyze food-related attributes.
- Filtered dishes above 500 to identify premium items.
- Filtered popular dishes with ratings above 4.0.
- Computed average, minimum, and maximum price across all dishes.
- Calculated average price by city to analyze regional variations.

- Analyzed category distribution to study customer preferences.

3. Key Insights

- Price Distribution: Most dishes are moderately priced (200–300). Outliers above 2000 represent premium/fine dining.
- City-Level Insights: Bengaluru has the highest number of restaurants, followed by New Delhi, Hyderabad, and Mumbai.
- Category Insights: 'Recommended' is the most frequent category, followed by Desserts, Snacks, and Pizzas.
- Rating Insights: Average rating is 2.5, but top-rated dishes (>4.0) are concentrated in premium restaurants and categories like Desserts and Pizzas.
- Restaurant Insights: Fast-food chains like Domino's, Pizza Hut, KFC, and Subway dominate the dataset.

4. Recommendations

- Pricing Strategy: Focus on keeping popular dishes affordable while promoting premium items strategically.
- Category Promotion: Highlight desserts and snacks with high ratings to boost sales.
- Regional Insights: Strengthen operations in Bengaluru while exploring underrepresented cities for growth.
- Customer Engagement: Improve average ratings through quality consistency and promotional campaigns.
- Future Analytics: Use clustering to group dishes by price and ratings for targeted marketing.

5. Conclusion

The analysis of the Swiggy dataset reveals that customers prefer affordable to mid-range dishes, with fast-food and casual dining dominating across cities. Bengaluru emerges as the largest hub for Swiggy listings. Higher-rated dishes are concentrated in premium categories like desserts and pizzas. These insights can guide pricing, promotions, and regional strategies, while advanced analytics can further optimize business decisions.