Project: Restaurant Data Analysis (Marketing)

# Problem Statement

A restaurant consolidator is seeking to revamp its B-to-C portal using intelligent automation technology. The goal is to identify and recommend restaurants using various metrics. To develop an effective model, it is crucial to understand the behaviour of the available data.

# Objective

The objective of this project is to perform a comprehensive data analysis to understand the characteristics and patterns within the restaurant data. This analysis will aid in building a model to recommend restaurants effectively.

# Steps Performed

1. Preliminary Data Inspection

- Inspected the structure of the data.

- Identified and handled missing values.

- Cleaned variable names.

- Removed duplicates.

2. Geographical Distribution Analysis

- Analysed the distribution of restaurants across different cities.

- Identified cities with the maximum and minimum number of restaurants.

3. Ratings Distribution Analysis

- Explored the overall distribution of restaurant ratings.

4. Franchise Presence Analysis

- Identified franchises with the most national presence.

5. Table Booking Analysis

- Analysed the ratio between restaurants that allow table booking and those that do not.

6. Online Delivery Analysis

- Determined the percentage of restaurants providing online delivery.

7. Votes Analysis

- Compared the number of votes for restaurants that deliver versus those that do not.

8. Cuisine Analysis

- Identified the top 10 cuisines served across different cities.

- Analysed the maximum and minimum number of cuisines a restaurant serves.

- Examined the relationship between the number of cuisines served and ratings.

9. Cost Analysis

- Discussed the relationship between cost and other variables.

10. Factors Affecting Ratings

- Analysed factors in the data that may affect ratings, including the number of cuisines, cost, and delivery options.

# Conclusion

The data analysis revealed several insights about the restaurant industry:

- Geographical Distribution: Certain cities have a higher concentration of restaurants, indicating potential markets.

- Ratings Distribution: Understanding the spread of ratings helps in identifying quality benchmarks.

- Franchise Presence: Knowing which franchises have a national presence can guide partnership decisions.

- Table Booking & Delivery Options: The availability of table booking and online delivery significantly impacts customer preferences and ratings.

- Cuisines & Ratings: There is a notable relationship between the variety of cuisines offered and restaurant ratings.

- Cost Analysis: Cost factors play a crucial role in customer satisfaction and ratings.

These insights can guide the development of an intelligent automation model to recommend restaurants effectively, enhancing the user experience on the B-to-C portal.