Zomato Restaurant Dataset Analysis Using Python

# Objective

The primary goal of this project is to analyze Zomato's restaurant dataset to derive meaningful insights regarding restaurant types, online ordering trends, customer ratings, and cost distributions. This analysis helps in understanding customer behavior and restaurant performance metrics.

# Technologies Used

- Python 3  
- Pandas – Data manipulation  
- NumPy – Numerical operations  
- Matplotlib – Data visualization  
- Seaborn – Statistical data visualization

# Dataset

Name: Zomato-data-.csv  
Source: Zomato Restaurant Listings

Key Columns:

* - name: Restaurant name
* - rate: Customer rating
* - votes: Number of votes by users
* - online\_order: Whether online ordering is available
* - listed\_in(type): Type of restaurant
* - approx\_cost(for two people): Cost for two people

# Code Explanation

## Loading and Previewing Data

Loads the dataset and shows the first few rows.

## Cleaning the Ratings Column

Extracts and converts the rating values to float format from strings like '4.1/5'.

## Dataset Summary

Provides information on columns, non-null values, and data types.

## Restaurant Type Count

Bar chart showing the frequency of different restaurant types.

## Votes Analysis by Restaurant Type

Plots total votes per restaurant type.

## Restaurant(s) with Maximum Votes

Identifies the restaurant(s) that received the highest votes.

## Online Order Availability Count

Visualizes the count of restaurants offering online orders.

## Rating Distribution

Shows how ratings are distributed among the restaurants.

## Cost for Two Analysis

Visualizes how restaurant pricing varies.

## Boxplot: Online Order vs Ratings

Shows how ratings differ for restaurants based on online order availability.

## Heatmap of Online Orders by Restaurant Type

Highlights the concentration of online ordering features across restaurant types.

# Key Insights

* - Some restaurant types receive significantly higher votes and engagement.
* - Online ordering is widely available and seems to correlate with higher ratings.
* - The majority of ratings fall within a specific range, indicating overall customer satisfaction.
* - Certain restaurant types are more popular in terms of votes and reviews.
* - A few restaurants stand out with significantly higher votes.

# Conclusion

This project provides a comprehensive analysis of Zomato restaurant data using Python. It showcases how data cleaning, grouping, and visualization can be used to extract business insights and understand customer trends in the food delivery industry.