Restaurant Analysis Decomposition

Objective

To analyze restaurant performance within the Zomato dataset and determine what factors contribute to a restaurant's success in terms of revenue and popularity

Research Questions

- Which restaurants generate the highest total revenue?
- Which restaurants receive the most orders?
- Are certain cuisine types associated with higher revenue?
- Does menu pricing influence a restaurant’s order volume or revenue?
- Are top-performing restaurants clustered in specific locations?

Hypotheses

- H1: Restaurants offering mid-range menu pricing generate higher revenue than those with high-end or low-end pricing.
- H2: Cuisine type significantly influences a restaurant’s popularity (as measured by order count).
- H3: There is a positive correlation between the variety of menu items and total revenue.

Data Tables to Use

restaurant: Contains restaurant names, locations, and potentially cuisine type.

orders: Key table for revenue and order volume.

menu: Menu items and prices per restaurant.

food (optional): Additional food-level detail if needed for item variety or type.

Metrics to Analyze

- Total revenue per restaurant
- Total number of orders per restaurant
- Average price per menu item (or price range)
- Revenue by cuisine type
- Revenue by location

Data Preparation Steps

1. **Join Tables**:
    a. Join **orders** with **restaurants** via **restaurant_id** to link revenue and restaurant attributes.
    b. Join **menu** with **restaurant** to calculate average price and menu variety.
2. **Aggregate Metrics**:
    a. Calculate total revenue per restaurant.
    b. Count total number of orders per restaurant.
    c. Compute average menu item price per restaurant.
    d. Determine the number of unique items per menu.
3. **Filter**:
    a. Exclude restaurants with fewer than 5 orders (to remove outliers).
    b. Exclude entries with missing pricing or location data.
4. **Transform**:
    a. Group by cuisine type or location to spot performance trends.
    b. Optional: categorize restaurants into pricing tiers (e.g., low, medium, high).

Planned Visualizations for Dashboard

- **Bar Chart**: Top 10 restaurants by revenue.
- **Bar Chart**: Order volume by cuisine type.
- **Scatter Plot**: Average menu price vs. revenue.
- **Heat Map**: Revenue distribution by restaurant location.
- **Pie Chart**: Cuisine type shared among top 20 restaurants.
- **Stacked Bar**: Revenue vs. menu size (bucketed ranges).

Expected Deliverables

- A Tableau dashboard showing key performance trends.
- A report summarizing insights on revenue drivers, cuisine performance, and pricing influence.