

# **Restaurant Data Decomposition**

Bashan Gumm

Objective: Restaurant Analysis Decomposition

In this decomposition, I want to analyze the restaurant dataset to identify the trends and patterns that will help the client make business decisions regarding their restaurants. I will answer the following question in my decomposition/analysis: What questions do you want to answer with your dashboard? What hypotheses do you have? What visualizations will be used? How do you need to work with data before assembling the dashboard?

The questions I want to answer in my research plan are the following:

## **1. What cuisine types are the most popular?**

- I will use a bar graph to visualize what foods are the most popular, with the different types of cuisines on the X-axis and the average amount of food on the Y-axis. Before assembling the dashboard, I need to group all the different types of cuisines and count the total sum of each type of cuisine.
- This analysis will help determine what cuisines are more popular such as Indian food or fast food.

## **2. Which city has the highest average restaurant rating?**

- I will use a bar graph that shows which city has the highest average restaurant rating. The average ratings will be on the Y axis and the cities will be on the X axis. The cities will have to be filtered as some cities do not have enough ratings to be counted.
- This analysis will determine what restaurants are performing better based on ratings. Cities with higher average ratings may indicate better restaurant quality and help identify what regions customers are generally happier with their dinner options.

## **3. What is the price distribution across restaurants?**

- For this analysis, I will use a pie chart showing how the restaurants are distributed across price categories. This will highlight whether most restaurants cater to affordability for diners or premium costs.

## **4. What Is the Revenue Distribution Among Restaurants with Different Cuisine Types?**

-This analysis will determine what cuisine types are more profitable than others. Using a bar chart will visually display which types of food generate the most revenue among restaurants.

## **5. Is There a Relationship Between Restaurant Price and Rating?**

-This analysis could reveal trends such as higher-priced restaurants typically receiving higher ratings due to perceived quality or show that price is not a significant factor in determining customer satisfaction. This graph will use a scatterplot to investigate if there is a relationship between the price of meals and restaurant ratings with the restaurant price (cost) on the x-axis and the ratings on the y-axis.

### **Conclusion:**

The decomposition of restaurant data will provide a view of restaurant performance in terms of popularity, revenue generation, customer satisfaction, and pricing. Using data visualization tools like Power BI or Tableau, I will create dashboards that visualize findings and exploration that will be useful for marketing data-driven decisions in restaurant management or marketing strategies.