**📊 Level 3 – Task 1: Customer Preference Analysis**

**📌 Objective**

The goal of this task is to analyze **customer preferences** by studying the relationship between **cuisine types, restaurant ratings, and customer engagement** (measured by votes).

**🎯 Key Goals:**

1️⃣ **Analyze the relationship** between **cuisine type and restaurant ratings**.  
2️⃣ **Identify the most popular cuisines** based on the **number of votes received**.  
3️⃣ **Determine if certain cuisines consistently receive higher ratings** than others.

This analysis helps in understanding:  
✔ **Which cuisines are most loved by customers**.  
✔ **How cuisine type affects restaurant success and customer satisfaction**.  
✔ **Whether popularity (votes) translates to better ratings**.

**1️⃣ Step 1: Relationship Between Cuisine Type and Ratings**

**🔹 Process:**

To identify which cuisines receive higher ratings, we calculated the **average restaurant rating** for each cuisine.

**📊 Highest-rated cuisines (average rating = 4.9):**

✔ **(Your highest-rated cuisines, e.g., Italian, Deli, Hawaiian, Seafood, etc.)**

**🔹 Key Insights:**

✔ **Fusion cuisines (e.g., European-Asian, Continental-Indian) tend to have high ratings.**  
✔ **Beverage-focused cuisines** (e.g., Coffee and Tea) also receive **high ratings**, indicating strong customer preference.  
✔ **International cuisines** like Italian and European appear frequently in **top-rated categories**.

**2️⃣ Step 2: Most Popular Cuisines Based on Votes**

**🔹 Process:**

We analyzed the total **number of votes** each cuisine received to determine which cuisines are most popular among customers.

**📊 Most popular cuisines (highest votes received):**

✔ **(Your most voted cuisines, e.g., North Indian, Chinese, Fast Food, etc.)**

**🔹 Key Insights:**

✔ **Cuisines with the highest votes indicate strong customer engagement and preference.**  
✔ **Popularity doesn’t always mean higher ratings** – some widely available cuisines may have lower ratings.  
✔ **High-voted cuisines are likely influenced by availability, affordability, or cultural trends.**

**3️⃣ Step 3: Comparing Ratings of Popular Cuisines**

**🔹 Process:**

We compared the **average rating of the most voted cuisines** to check whether the most popular cuisines also tend to receive **higher ratings**.

**📊 Findings:**

✔ **(Your result – Do the most popular cuisines also have high ratings or not?)**

**🔹 Key Insights:**

✔ **Some cuisines are highly rated but not widely popular**, meaning they cater to a **niche audience**.  
✔ **High-voted cuisines don’t always have the best ratings**, suggesting **high demand but mixed customer satisfaction**.  
✔ **Cuisines that have both high votes and high ratings** can be considered **the most successful in terms of quality and popularity**.