**CAPSTONE PROJECT 3: Restaurant Rating**

**Analysis for Question 1: Highest Rated Restaurants and the Impact of Consumer Preferences**

1. **Characteristics of the Highest-Rated Restaurants**:
   * **Top-Rated Restaurants**: The analysis of the top-rated restaurants showed that establishments like **Emilianos**, **Michiko Restaurant Japones**, and **Restaurant Las Mañanitas** had high average ratings.
   * **Price Level**: The highest-rated restaurants spanned low, medium, and high price categories, suggesting that quality and customer satisfaction are not strictly tied to the price point.
   * **Alcohol Service**: Some of the top-rated restaurants served wine and beer, while others did not provide alcohol service at all. This indicates that alcohol availability alone may not heavily influence customer ratings.
   * **Locations**: Most of the highest-rated restaurants were found in **San Luis Potosi** and **Cuernavaca**, indicating these cities may have a higher concentration of quality dining options.
2. **Effect of Consumer Preferences on Ratings**:
   * **Cuisine Preferences**: Analyzing the relationship between consumer preferences and restaurant ratings suggested that consumer expectations align with certain restaurant types. For instance, if a consumer's preferred cuisine matched what the restaurant offered, ratings were often higher.
   * **Rating Variability by Preference**: Some cuisines had consistently higher ratings when matched with consumer preferences. For example, restaurants serving **Japanese or regional specialties** scored well when consumers' preferred cuisines were aligned with these types.
   * **Food and Service Ratings**: Restaurants that excelled in both food quality and service generally received higher overall ratings.

### Analysis for Question 2: Consumer Demographics and Bias in the Data

#### 1. ****Age Distribution****:

* The age distribution of consumers revealed that the majority fall into the **young adult category (e.g., ages 20-30)**.
* Fewer data points were available for older age groups (e.g., 50+).

#### 2. ****Gender Breakdown****:

* Balanced distribution between male and female consumers.

#### 3. ****Marital Status and Occupation****:

* A significant portion of consumers were found to be **single** or **unmarried.**
* The occupation analysis highlighted a high number of **students and employed professionals**.

#### 4. ****Budget Preferences****:

* Most consumers in the data sample had a **medium to low budget**.
* There were fewer consumers with a high budget.

#### 5. ****Geographic Distribution****:

* The map visualization showed that most consumers came from cities such as **San Luis Potosi** and **Cuernavaca**.

### Bias Indicators:

* **Age and Occupation**: The high representation of young adults and students points to a bias towards younger, budget-conscious dining preferences. This can affect insights if investors are targeting a more diverse age range.
* **Budget Skew**: A majority in the medium to low budget category may skew recommendations toward more economical dining solutions.
* **Geographic Focus**: The data is not evenly distributed across all regions, so any insights drawn may not apply universally throughout Mexico.

### Key Insights:

* **Potential Bias**: The data sample shows a skew towards younger consumers, singles, and those with medium to low budgets. This suggests that any conclusions or recommendations may be more relevant to affordable, casual dining experiences favored by younger people and students.
* **Balanced Gender Representation**: The dataset seems balanced in terms of gender, which is a positive indicator of reliability.
* **Geographic Limitation**: For businesses looking to expand outside major areas like **San Luis Potosi** or **Cuernavaca**, it’s essential to gather more data representative of other regions.

**Analysis for Question 3: Are there any demand & supply gaps that you can exploit in the market?**

Yes, there are several demand and supply gaps in the market based on consumer preferences and available restaurant offerings. Specifically:

1. **Underrepresented Cuisines**:
   * Certain cuisines like **Afghan, African, Asian, Turkish, and Tibetan** have **demand but no supply** in the market. Introducing restaurants that specialize in these cuisines could capture unmet demand.
   * **American cuisine** has notable demand, but there are only five restaurants serving it. Expanding the number of American restaurants could meet this demand effectively.
2. **Opportunity for Diverse Cuisine Expansion**:
   * Offering a wider range of cuisines could differentiate a new restaurant from the existing market, especially for cuisines that consumers prefer but currently cannot access.

**Analysis for Question 4: If you were to invest in a restaurant, which characteristics would you be looking for?**

Based on the characteristics linked to higher ratings, an ideal restaurant for investment would have the following attributes:

1. **Alcohol Service**: Restaurants that serve Wine & Beer or offer a Full Bar tend to receive higher ratings.
2. **Price Range**:
   * A **low or medium price level** is associated with better ratings, suggesting that customers are more satisfied with restaurants offering reasonable prices.
3. **Franchise Status**:
   * **Franchise restaurants** that serve Wine & Beer in closed areas generally have higher ratings.
4. **Area Type**:
   * Restaurants in **closed areas** (such as indoor spaces or structured dining areas) rate slightly better.
5. **Parking Availability**: While not directly analyzed here, having available parking may enhance convenience, making a restaurant more attractive to customers.

**Ideal Investment Profile**: For a prospective restaurant, the ideal characteristics based on high-rated restaurants would be a **franchise with Wine & Beer service**, a **low to medium price range**, located in a **closed area** with potential parking availability.