PROJECT TITLE

Restaurant Data Analysis

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Executive Summary

This report provides a comprehensive analysis of a restaurant dataset, focusing on various aspects such as cuisine popularity, restaurant distribution, ratings, and service availability. The analysis aims to uncover insights that can inform strategic decisions in the restaurant industry, particularly for restaurant owners, marketers, and city planners.

Key Findings

1.Cuisines Analysis: Top Three Cuisines: The most common cuisines across the dataset were identified, representing the culinary preferences of the population.

Cuisines Distribution: A percentage breakdown of restaurants serving each of these top cuisines was calculated to understand market share.

2. City-wise Analysis: City with Most Restaurants: The dataset revealed the city with the highest number of restaurants, indicating a potential hub for the restaurant business.

Average Rating by City: Average restaurant ratings were calculated for each city, with one city emerging as the highest-rated, suggesting a particularly competitive or high-quality restaurant scene.

Price Range and Services: Price Range Distribution: A histogram was created to visualize how restaurants are distributed across different price ranges, giving insights into market segmentation.

Online Delivery and Table Booking: The relationship between price range and the availability of online delivery and table booking was analyzed. It was found that higher-priced restaurants are more likely to offer these services.

4.Ratings Analysis: Aggregate Ratings Distribution: The distribution of aggregate ratings was analyzed to identify the most common rating range, providing insight into overall customer satisfaction.

Online Delivery vs. Ratings: The report compared the average ratings of restaurants with and without online delivery, highlighting whether offering online delivery impacts customer satisfaction.

5. Voting Patterns: Votes Analysis: The average number of votes received by restaurants was calculated, with a specific focus on the restaurants with the highest and lowest votes. A correlation analysis between votes and ratings was also conducted.

Cuisine Combinations and Ratings: The report explored common cuisine combinations and analyzed whether certain combinations are associated with higher ratings.

6. Geospatial Analysis: Restaurant Locations: A map plotting restaurant locations using longitude and latitude coordinates was created, revealing patterns and clusters of restaurants in specific areas.

Restaurant Chains: The presence of restaurant chains in the dataset was identified, and their ratings and popularity were analyzed.

Overall, the report highlights the dynamic nature of the restaurant industry and offers data-driven recommendations to enhance business performance and customer satisfaction.

This summary captures the essence of the detailed analysis conducted and can serve as a high-level overview for stakeholders interested in the findings.

Study Background

The restaurant industry plays a significant role in the global economy, contributing to employment, tourism, and cultural experiences. In a competitive market, understanding customer preferences, pricing strategies, and service offerings is crucial for restaurant success.

Purpose of the Study

This study aims to analyze a restaurant dataset to uncover insights into cuisine popularity, pricing, service availability, customer ratings, and geographic distribution. The goal is to provide actionable data to guide decision-making in the restaurant industry.

Key Focus Areas

1. Cuisines Popularity: Identifying the most common and in-demand cuisines.

2.City-wise Analysis: Highlighting cities with the most restaurants and highest average ratings.

3. Pricing Strategies: Exploring the relationship between price range and services like online delivery and table booking.

4. Customer Satisfaction: Analyzing ratings and reviews to understand what drives customer satisfaction.

5. Geographic Distribution: Mapping restaurant locations to identify market clusters and opportunities.

6. Restaurant Chains: Examining the presence and performance of restaurant chains.

Methodology

The study uses descriptive statistics, correlation analysis, and geospatial mapping to analyze data on cuisines, prices, ratings, and locations.

Conclusion

This study provides a concise analysis of key factors in the restaurant industry, offering valuable insights for stakeholders to enhance customer satisfaction and business success..

Aims & Objectives

The aim of this project is to analyze a restaurant dataset to uncover trends and insights that can guide strategic decisions in the restaurant industry, focusing on customer preferences, pricing, services, and geographic distribution.

Objectives

1. **Identify Top Cuisines:**
    - Determine the most common cuisines and their prevalence among restaurants.
2. **Analyse Restaurant Distribution:**
    - Identify cities with the most restaurants and highest average ratings.
3. **Examine Pricing Strategies:**
    - Visualize and analyse the distribution of price ranges and their relationship with services like online delivery.
4. **Evaluate Customer Satisfaction:**
    - Compare ratings between restaurants with and without online delivery, and analyse rating distributions and vote counts.
5. **Explore Cuisine Combinations:**
    - Identify popular cuisine combinations and assess their impact on ratings.
6. **Geospatial Analysis:**
    - Map restaurant locations to identify patterns and clusters.
7. **Assess Restaurant Chains:**
    - Analyse the presence, ratings, and popularity of restaurant chains.

These objectives aim to provide actionable insights for improving restaurant business performance and customer satisfaction.

Methodology

This project takes a systematic approach to analyze a restaurant dataset, focusing on understanding key aspects like popular cuisines, pricing strategies, customer satisfaction, and geographic patterns. Here's how the analysis was conducted:

1. Data Collection and Preparation

- **Getting the Data Ready:** We started by importing the dataset and getting a sense of what it contained. Then, we cleaned it up—fixing any missing or incorrect data and making sure everything was in the right format, such as converting "Has Table Booking" and "Has Online Delivery" into simple yes/no categories.

2. Exploring the Data

- **Popular Cuisines:** We looked at which cuisines were the most common and calculated the percentage of restaurants offering these top dishes.
- **City Breakdown:** We counted the number of restaurants in each city and calculated their average ratings. This helped us identify the cities with the most restaurants and the best average ratings.

3. Pricing and Services

- **Price Range Distribution:** We created charts to see how restaurants were spread across different price ranges, helping us understand market segmentation.
- **Service Offerings:** We analyzed whether higher-priced restaurants were more likely to offer online delivery or table booking, giving insight into how pricing affects service levels.

4. Customer Satisfaction

- **Ratings Comparison:** We compared the average ratings of restaurants that offer online delivery with those that don't, to see if there's a difference in customer satisfaction.
- **Rating Trends:** We checked out the distribution of overall ratings to find out the most common rating range. We also looked at the average number of votes restaurants received and explored if there was any connection between votes and ratings.

5. Cuisine Combinations

- **Popular Pairings:** We identified the most common combinations of cuisines offered by restaurants and analyzed if certain combinations tend to receive higher ratings.

6. Mapping the Restaurants

- **Geographical Spread:** Using the longitude and latitude coordinates, we mapped out where restaurants were located. This helped us spot any patterns or clusters in specific areas.

- **Restaurant Chains:** We identified restaurant chains in the dataset and analyzed their distribution, ratings, and popularity compared to independent restaurants.

7. Text Review Analysis (if applicable)

- **Review Insights:** If text reviews were available, we would analyze them to find common positive and negative keywords, calculate the average length of reviews, and see if longer reviews tend to correlate with better or worse ratings.

8. Bringing it All Together

- **Visualizing the Results:** We used charts, graphs, and maps to make the findings easy to understand and share.
- **Interpreting the Findings:** We dug into the results to provide clear insights and practical recommendations for restaurant owners, marketers, and other stakeholders.
- **Final Report:** We documented the entire process and compiled everything into a comprehensive report that sums up the key insights and takeaways.

This approach ensured that we thoroughly explored the dataset and uncovered meaningful insights that could be used to make better decisions in the restaurant industry.

Results

- **Top cuisines**

The analysis of the dataset revealed the most commonly served cuisines among the restaurants:

1. **North Indian Cuisine:**
    - **Count:** 3,960 restaurants
    - **Percentage:** 41.46% of the restaurants offer North Indian cuisine, making it the most popular cuisine in the dataset.
2. **Chinese Cuisine:**
    - **Count:** 2,735 restaurants
    - **Percentage:** 28.64% of the restaurants serve Chinese cuisine, ranking as the second most common option.
3. **Fast Food:**
    - **Count:** 1,986 restaurants
    - **Percentage:** 20.79% of the restaurants specialize in Fast Food, making it the third most popular choice among the eateries.

These results highlight the dominant role of North Indian cuisine in the restaurant industry, followed by Chinese and Fast Food, which also have a significant presence.

- **City wise analysis of restaurants**

City with the Highest Number of Restaurants:

City: New Delhi

Number of Restaurants: 5,473

New Delhi stands out as the city with the highest concentration of restaurants in the dataset, highlighting its vibrant and diverse culinary scene.

Average Rating for Restaurants in Each City:

The average ratings for restaurants vary across different cities, with several cities boasting high levels of customer satisfaction. Some notable examples include:

Abu Dhabi: 4.30

Ahmedabad: 4.16

Wellington City: 4.25

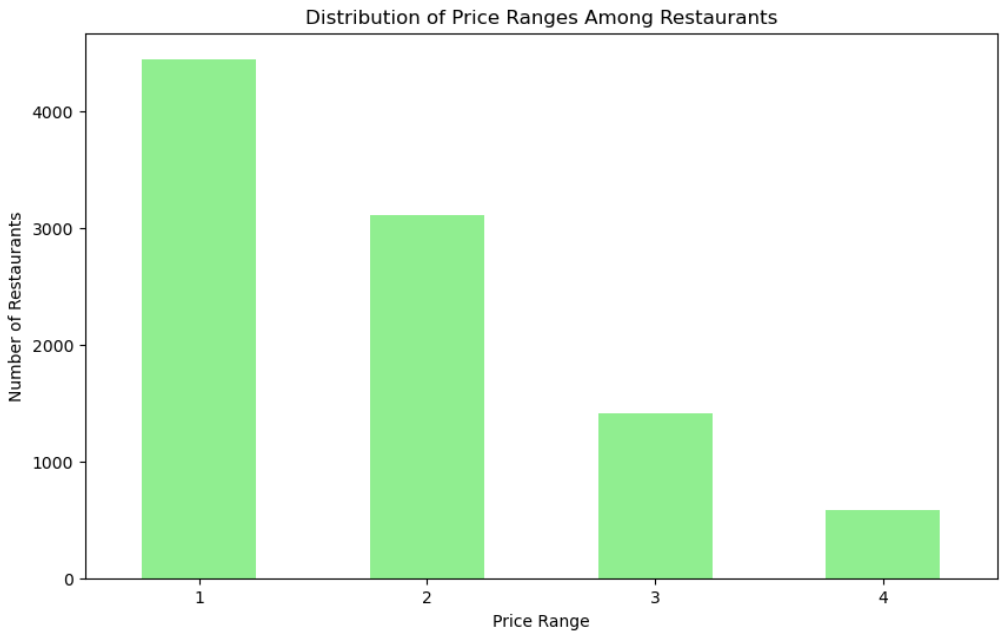
City with the Highest Average Rating:

City: Inner City

Average Rating: 4.9

Inner City achieved the highest average rating among all cities, indicating an exceptional level of customer satisfaction and restaurant quality in this area.

Price range distribution



Interpretation of Price Range Distribution

The bar chart shows that the majority of restaurants fall into the lower price categories, with Category 1 having the highest number of restaurants (over 4,000). Category 2 follows, with about 3,000 restaurants. Categories 3 and 4 have significantly fewer restaurants, indicating that mid-high and high-priced dining options are less common. This suggests a market trend where affordable dining is more prevalent than luxury or high-end dining experiences.

The analysis shows the distribution of restaurants across different price categories:

1. Low Price (Category 1): 46.53% of restaurants, making it the most common price range.
2. Mid-Low Price (Category 2): 32.59% of restaurants.
3. Mid-High Price (Category 3): 14.74% of restaurants.
4. High Price (Category 4): 6.14% of restaurants, the least common category.

Most restaurants are in the lower price ranges, with fewer options in the higher-end market.

Online Delivery Analysis

Percentage of Restaurants Offering Online Delivery:

- 25.66% of the restaurants in the dataset offer online delivery services.

Average Ratings Based on Online Delivery Availability:

- Restaurants with Online Delivery:
    - Average Rating: 3.25
- Restaurants without Online Delivery:
    - Average Rating: 2.47

These results indicate that a significant portion of restaurants do not offer online delivery. However, those that do tend to have higher average ratings, suggesting a positive correlation between offering online delivery and customer satisfaction.

Restaurant ratings

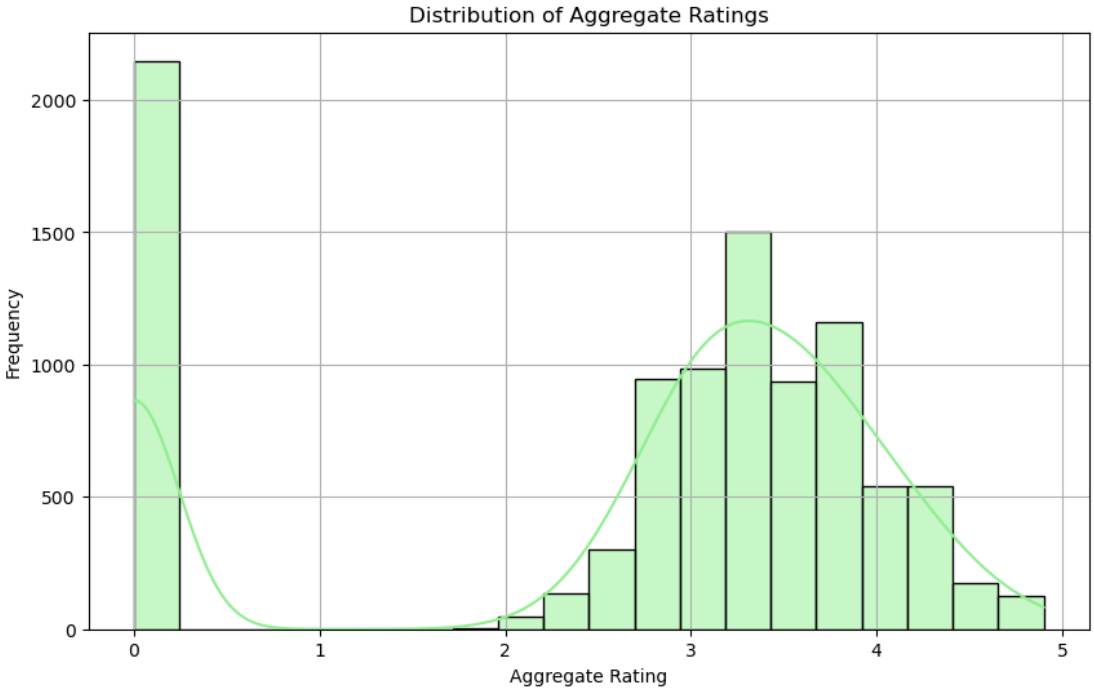
The distribution of aggregate ratings for the dataset is visualized in the histogram below. The data is analyzed to understand the frequency and spread of the ratings.

The histogram shows the frequency of ratings ranging from 0 to 5. Key observations from the histogram include:

- A significant number of ratings are at the extreme low end (0), indicating a large number of items with no rating or a zero rating.
- The distribution forms a right-skewed pattern with a peak around the rating of 3.
- There are fewer ratings in the middle range (1-2) and high end (4-5), suggesting a tendency towards either very low or moderately high ratings.

Here are the detailed descriptive statistics of the aggregate ratings:

- **Count**: 9551
- **Mean (Average Rating)**: 2.666
- **Standard Deviation (Std Dev)**: 1.516
- **Minimum Rating**: 0.0
- **25th Percentile (Q1)**: 2.5
- **Median (50th Percentile)**: 3.2
- **75th Percentile (Q3)**: 3.7
- **Maximum Rating**: 4.9



Interpretation

- **Count**: The total number of ratings recorded is 9551.
- **Mean**: The average rating is approximately 2.67, indicating that the overall tendency is slightly below the midpoint of the rating scale.
- **Standard Deviation**: With a standard deviation of 1.52, there is a considerable spread around the mean, showing variability in the ratings.
- **Minimum and Maximum Ratings**: The ratings range from a minimum of 0 to a maximum of 4.9, with the highest ratings just below the maximum possible rating of 5.
- **Quartiles**: The 25th percentile at 2.5, median at 3.2, and 75th percentile at 3.7 indicate that half of the ratings lie between 2.5 and 3.7. The interquartile range (IQR) is 1.2, showing the spread of the middle 50% of the data.

The analysis of the aggregate ratings reveals a skewed distribution with a substantial number of low ratings. The mean rating of 2.67 and the median of 3.2 suggest that the majority of the ratings are around these values. The data indicates variability in the ratings, with a significant portion of the ratings being either very low or moderately high.

Analysis of Cuisine Combinations

The dataset includes a diverse range of cuisine types offered by various restaurants. This section explores the most popular combinations of cuisines and their frequencies within the dataset.

Sample Cuisines

Here are a few examples of the cuisines present in the dataset:

1. French, Japanese, Desserts
2. Japanese
3. Seafood, Asian, Filipino, Indian
4. Japanese, Sushi
5. Japanese, Korean

Popular Cuisine Combinations

The table below lists the most frequent combinations of cuisines along with their counts:

Combination	Count
(North Indian, Chinese)	1516
(North Indian, Mughlai)	728
(North Indian, Fast Food)	377
(Chinese, Fast Food)	331
(North Indian, South Indian)	314
(North Indian, Continental)	288
(Chinese, North Indian)	268
(Bakery, Desserts)	263
(Mughlai, Chinese)	258
(South Indian, Chinese)	239

Interpretation

North Indian and Chinese: The most common combination is North Indian and Chinese, with 1516 occurrences. This suggests a strong preference for these two cuisines together.

North Indian and Mughlai: The second most frequent combination is North Indian and Mughlai, occurring 728 times. This indicates that Mughlai cuisine is often paired with North Indian dishes.

North Indian and Fast Food: This combination appears 377 times, reflecting the popularity of quick-service North Indian food.

Chinese and Fast Food: With 331 occurrences, this combination highlights the appeal of Chinese fast-food options.

North Indian and South Indian: There are 314 instances of this combination, showing a significant interest in a mix of regional Indian cuisines.

North Indian and Continental: This combination appears 288 times, indicating a fusion of Indian and Western cuisines.

Chinese and North Indian: This combination is listed again with a slightly different order, showing 268 occurrences.

Bakery and Desserts: The combination of Bakery and Desserts is popular, with 263 mentions.

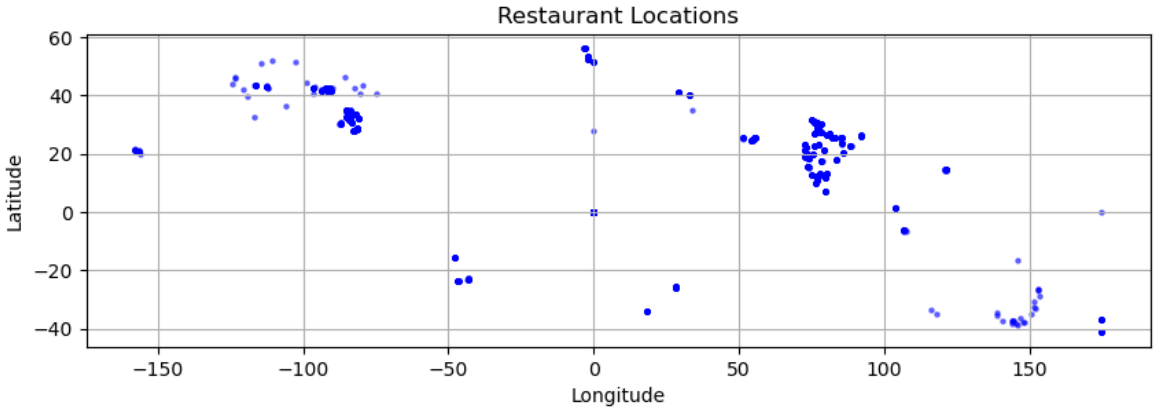
Mughlai and Chinese: This combination occurs 258 times, showing a blend of Mughlai and Chinese flavors.

South Indian and Chinese: With 239 occurrences, this combination is also popular, reflecting a mix of South Indian and Chinese cuisines.

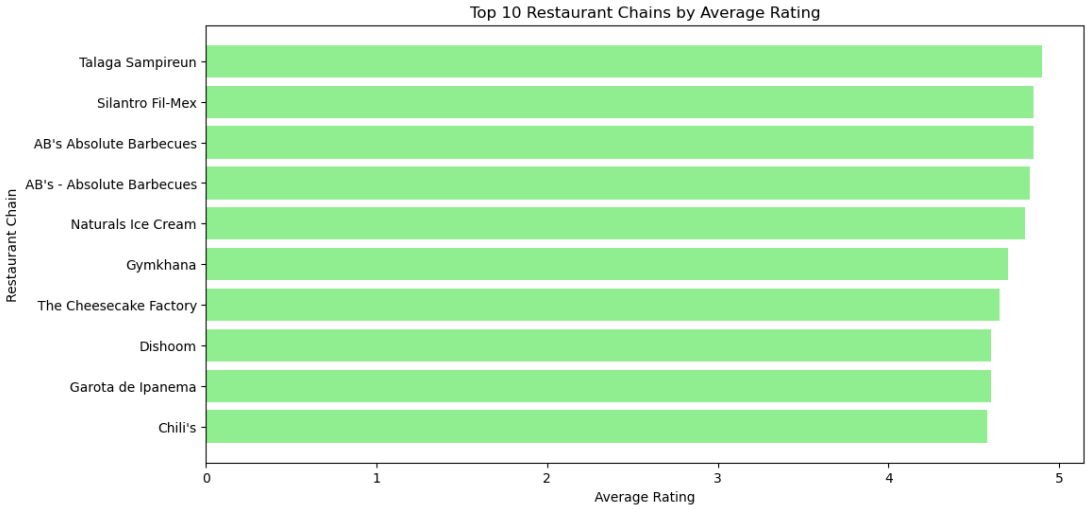
The analysis of cuisine combinations reveals a significant preference for certain pairings, particularly those involving North Indian and Chinese cuisines. These insights can help in understanding customer preferences and trends in the culinary landscape.

Geographic analysis

	Latitude	Longitude
0	14.565443	121.027535
1	14.553708	121.014101
2	14.581404	121.056831
3	14.585318	121.056475
4	14.584450	121.057508



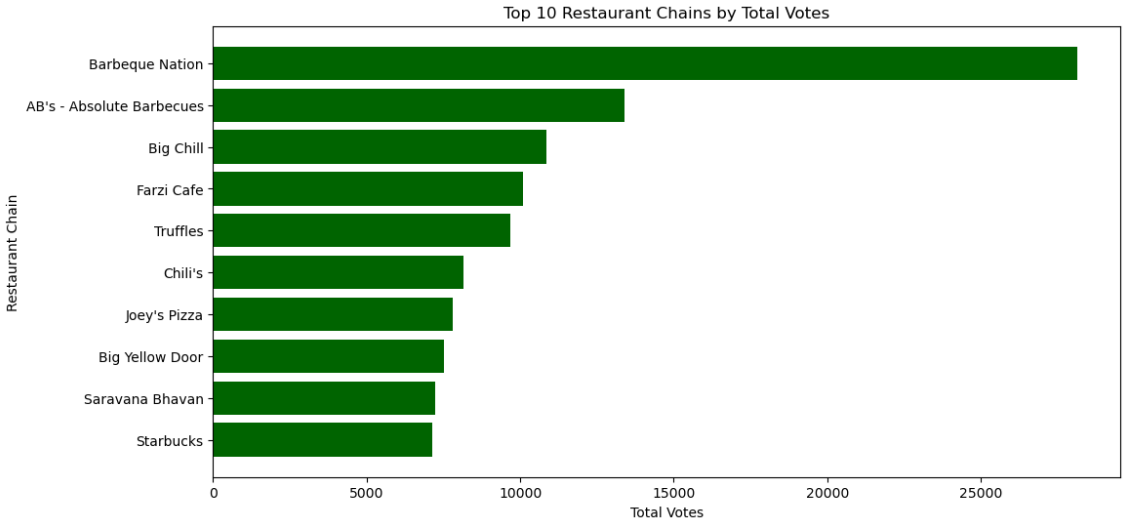
Restaurant chains



The top 10 restaurant chains by average rating are:

1. Talaga Sampireun
2. Silantro Fil-Mex
3. AB's Absolute Barbecues
4. AB's - Absolute Barbecues
5. Naturals Ice Cream
6. Gymkhana
7. The Cheesecake Factory
8. Dishoom
9. Garota de Ipanema

10. Chili's



The bar chart below displays the top 10 restaurant chains based on the total number of votes they received. This analysis provides insights into the popularity and customer preferences for these restaurant chains.

Bar Chart Analysis

Key Observations

1. **Barbeque Nation**:
    - Barbeque Nation leads with a significant margin, receiving the highest number of votes among all the restaurant chains. This indicates its strong popularity and customer preference.
2. **AB's - Absolute Barbecues**:
    - Following Barbeque Nation, AB's - Absolute Barbecues holds the second position. While it has fewer votes than Barbeque Nation, it still maintains a considerable lead over the other chains.
3. **Big Chill**:
    - Big Chill secures the third spot in the ranking, showing its substantial customer base and popularity.

4. **Farzi Cafe**:
    - Farzi Cafe ranks fourth, indicating a strong following and significant customer engagement.
5. **Truffles**:
    - Truffles holds the fifth position, reflecting its popularity among customers.
6. **Chili's**:
    - Chili's, occupying the sixth spot, demonstrates a significant number of votes, showcasing its popularity.
7. **Joey's Pizza**:
    - Joey's Pizza is in the seventh position, indicating a loyal customer base.
8. **Big Yellow Door**:
    - Big Yellow Door ranks eighth, showing a substantial number of votes and customer interest.
9. **Saravana Bhavan**:
    - Saravana Bhavan is in the ninth position, reflecting its popularity, particularly among those who prefer South Indian cuisine.
10. **Starbucks**:
    - Starbucks rounds out the top ten, indicating its widespread popularity and strong customer base.

Interpretation

- **Dominance of Barbecue Restaurants**: The top two spots being held by Barbeque Nation and AB's - Absolute Barbecues highlight a strong preference for barbecue cuisine among customers.
- **Diverse Cuisine Preferences**: The presence of various types of restaurants, including cafes, pizzerias, and specialty cuisine chains, indicates a diverse range of customer preferences.
- **Brand Loyalty and Customer Engagement**: The total votes reflect brand loyalty and customer engagement, with certain chains attracting significantly more votes, suggesting higher customer satisfaction and frequent patronage.

The analysis of the top 10 restaurant chains by total votes reveals significant insights into customer preferences and the popularity of different restaurant brands. Barbeque Nation and AB's - Absolute Barbecues dominate the rankings, while other chains like Big Chill, Farzi

Cafe, and Truffles also show strong customer engagement. This information can be valuable for understanding market trends and making informed business decisions.

This section provides an analysis of the distribution of rating texts, the average ratings associated with each rating text, and the top cuisines for restaurants that received an "Excellent" rating. This analysis helps in understanding customer satisfaction levels and the types of cuisines that are highly rated.

Rating Text Distribution

The distribution of rating texts among the dataset is as follows:

Rating Text	Count
Average	3737
Not rated	2148
Good	2100
Very Good	1079
Excellent	301
Poor	186

Key Observations:

The majority of the ratings fall under the "Average" category with 3737 instances.

"Not rated" is the second most common category with 2148 instances.

"Good" and "Very Good" ratings follow, with 2100 and 1079 instances, respectively.

"Excellent" ratings are relatively rare, with only 301 instances.

"Poor" ratings are the least common, with 186 instances.

Average Ratings for Each Rating Text

The table below shows the average aggregate rating for each rating text:

Rating Text	Average Rating
Excellent	4.66
Very Good	4.17
Good	3.68
Average	3.05
Poor	2.30
Not rated	0.00

Key Observations:

- Restaurants rated as "Excellent" have the highest average rating of 4.66.
- "Very Good" rated restaurants have an average rating of 4.17.
- "Good" rated restaurants have an average rating of 3.68.
- "Average" rated restaurants have a mean rating of 3.05.
- "Poor" rated restaurants have the lowest average rating of 2.30.
- "Not rated" restaurants have an average rating of 0, indicating that they haven't received any ratings.

Top 10 Cuisines for 'Excellent' Rated Restaurants

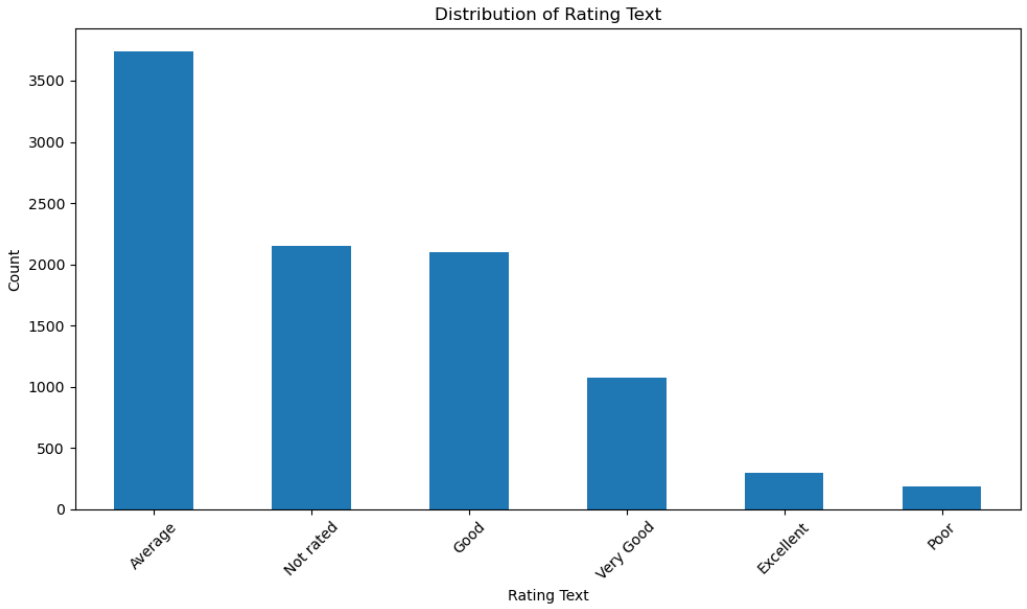
The table below lists the top 10 cuisines for restaurants that received an "Excellent" rating:

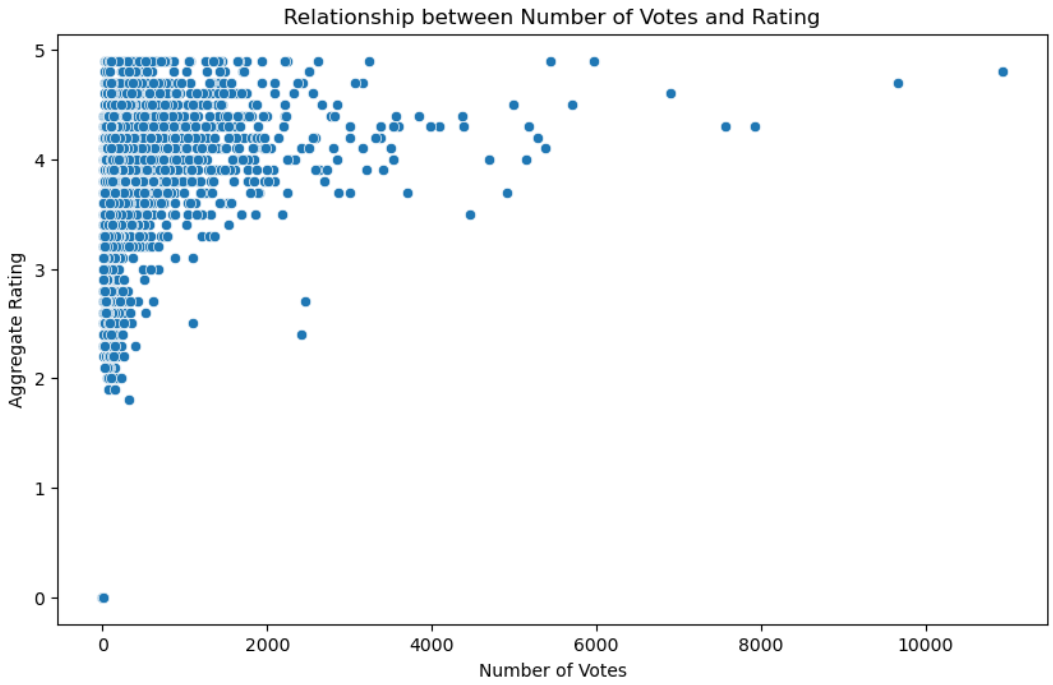
Cuisine	Count
North Indian	47
American	44
Italian	38
Cafe	38
Desserts	31
Continental	31
Asian	25
Chinese	23
Burger	21
Seafood	21

Key Observations:

- North Indian cuisine leads with 47 instances of "Excellent" ratings.
- American cuisine follows closely with 44 instances.
- Italian and Cafe cuisines both have 38 instances each.
- Desserts and Continental cuisines have 31 instances each.
- Asian cuisine is rated "Excellent" in 25 instances.
- Chinese cuisine follows with 23 instances.
- Both Burger and Seafood cuisines have 21 instances each.

The analysis of rating texts and average ratings reveals that the majority of the restaurants are rated as "Average," with a significant number also being "Not rated." "Excellent" ratings are the highest on average, followed by "Very Good" and "Good." The top cuisines for "Excellent" rated restaurants include North Indian, American, Italian, and Cafe, indicating their popularity and high customer satisfaction levels.





Relationship Between Number of Votes and Aggregate Rating

The scatter plot below illustrates the relationship between the number of votes a restaurant receives and its aggregate rating. This analysis helps in understanding if there's a correlation between customer engagement (measured by the number of votes) and customer satisfaction (measured by the aggregate rating).

Scatter Plot Analysis

Key Observations

1. **High Density of Low Vote Counts**:
    - The majority of the data points are clustered on the left side of the plot, indicating that most restaurants have received fewer than 2000 votes.
2. **Correlation between Votes and Ratings**:
    - There is a visible trend where higher aggregate ratings are associated with a higher number of votes. However, this trend is not strictly linear.
    - Many restaurants with high ratings (4 and above) have also received a large number of votes, suggesting that popular restaurants tend to have higher customer satisfaction.

3. **Outliers**:
    - Some outliers exist where restaurants have received a high number of votes but have lower ratings (below 3). This indicates that while they are popular, their customer satisfaction is relatively lower.
4. **High Ratings with Few Votes**:
    - Several restaurants with fewer votes also have high ratings, indicating that while they may not be as popular, they are well-rated by the customers who have voted.

Interpretation

- **Popularity and Quality**: The trend suggests that restaurants with higher ratings tend to attract more votes, possibly due to better service, food quality, or overall dining experience.
- **Customer Engagement**: Restaurants with a large number of votes and high ratings likely benefit from strong word-of-mouth and repeat customers, which contribute to their popularity.
- **Marketing and Visibility**: Some well-marketed restaurants might receive a high number of votes regardless of their rating, as seen in the outliers with many votes but lower ratings.

Analysis of Price Range vs. Online Delivery and Table Booking

Overview

This section explores the relationship between the price range of restaurants and two key services: online delivery and table booking. Understanding these correlations helps in identifying how pricing impacts the availability of these services.

Correlation Analysis

1. Correlation between Price Range and Online Delivery

- **Correlation Coefficient**: 0.08

Interpretation:

- The correlation coefficient of 0.08 indicates a very weak positive relationship between the price range and the availability of online delivery.
- This suggests that the price range of a restaurant has minimal influence on whether it offers online delivery services.
- Both high-end and budget-friendly restaurants are equally likely to offer online delivery, highlighting the broad adoption of this service across different pricing tiers.

2. Correlation between Price Range and Table Booking

- **Correlation Coefficient**: 0.50

Interpretation:

- The correlation coefficient of 0.50 indicates a moderate positive relationship between the price range and the availability of table booking services.
- Higher-priced restaurants are more likely to offer table booking services compared to lower-priced restaurants.
- This trend suggests that restaurants with higher price ranges might prioritize offering a more structured and premium dining experience, which often includes the option for table reservations.

Discussion

This project aimed to analyze various aspects of restaurant ratings, customer preferences, and service offerings. Key findings include:

1. **Aggregate Ratings Distribution**:
    - The distribution of aggregate ratings showed a significant number of restaurants with ratings around 2 to 4, with a notable peak at 0, indicating a substantial number of unrated restaurants.
2. **Cuisines Analysis**:
    - The most popular cuisine combinations include North Indian paired with Chinese and Mughlai.
    - The top cuisines for "Excellent" rated restaurants are North Indian, American, Italian, and Cafe, highlighting their high customer satisfaction.
3. **Restaurant Chains by Votes**:
    - Barbeque Nation leads significantly in total votes, suggesting its popularity and customer engagement.
    - Other popular chains include AB's - Absolute Barbecues, Big Chill, and Farzi Cafe.
4. **Rating Text and Average Ratings**:
    - "Excellent" rated restaurants have the highest average rating, followed by "Very Good" and "Good" ratings.
    - The majority of ratings are categorized as "Average," with "Not rated" being the second most common.
5. **Votes vs. Aggregate Rating**:
    - A positive correlation exists between the number of votes and aggregate ratings, with higher ratings generally associated with more votes.
    - Outliers indicate some restaurants with high votes but lower ratings, and some with high ratings but fewer votes.
6. **Price Range vs. Services**:
    - The correlation between price range and online delivery is very weak (0.08), indicating that online delivery is broadly adopted across all price ranges.
    - A moderate correlation (0.50) between price range and table booking services suggests that higher-priced restaurants are more likely to offer table bookings.

Implications

- **Customer Engagement**: High ratings and votes reflect strong customer satisfaction and engagement, which are crucial for restaurant success. Restaurants should focus on quality and customer experience to improve their ratings and attract more votes.
- **Service Offerings**: The analysis indicates that online delivery is a standard service across all price ranges, whereas table booking is more prevalent in higher-priced restaurants. This insight can help restaurants tailor their service offerings based on their target market and price range.
- **Cuisines and Preferences**: Understanding popular cuisines and combinations can help new and existing restaurants in menu planning and catering to customer preferences to enhance satisfaction and ratings.

Limitations

- **Data Quality**: The presence of a significant number of unrated restaurants may affect the overall analysis. Efforts to encourage more ratings and reviews could provide a more comprehensive view.
- **Geographical Bias**: The analysis might be influenced by the geographical distribution of the data. Different regions may have varying preferences and trends that are not fully captured in this study.

Conclusion

This project provides valuable insights into restaurant ratings, customer preferences, and service offerings. The key takeaways are:

- Popularity and Quality: High aggregate ratings are associated with more votes, indicating that quality and popularity are intertwined. Restaurants should focus on maintaining high standards to boost customer satisfaction and engagement.
- Service Adoption: Online delivery is widely adopted across all price ranges, while table booking services are more common in higher-priced restaurants. These trends can guide restaurants in service planning and customer experience enhancement.
- Cuisine Preferences: North Indian, American, Italian, and Cafe cuisines are highly rated, suggesting their popularity and potential focus areas for restaurants aiming to achieve high customer satisfaction.

Overall, the findings highlight the importance of quality, customer engagement, and strategic service offerings in the competitive restaurant industry. By leveraging these insights, restaurants can better align their operations with customer preferences and enhance their market positioning**.**

Recommendation

Boosting Customer Engagement and Satisfaction

1. **Get More Reviews**:
    - Encourage your customers to leave reviews by offering small perks like discounts on their next visit or entering them into a prize draw. More reviews can help you understand what customers love and what needs improvement.
2. **Focus on What Matters**:
    - To keep your ratings high, focus on the things that matter most to customers: great food, friendly service, and a nice atmosphere. Regular staff training and asking for customer feedback can help you stay on top of things.

Smart Service Choices

3. **Offer Delivery**:
    - If you're not already offering delivery, now's the time to start. Partner with popular delivery apps to make it easy for customers to enjoy your food from the comfort of their homes.
4. **Table Booking for Fancy Places**:
    - If your restaurant is on the pricier side, offering table bookings is a must. Invest in a good table booking system to make the dining experience smoother and more enjoyable for your guests.

Menu and Cuisine Tips

5. **Serve What's Popular**:
    - Consider adding popular cuisines like North Indian, American, Italian, and Cafe to your menu. These are big hits with customers and can help attract more people to your restaurant.
6. **Try Fusion Dishes**:
    - Experiment with combining popular cuisines, like North Indian and Chinese, to create exciting new dishes. This can attract customers looking for unique dining experiences.

Marketing and Promotion

7. **Promote Your High Ratings**:
    - If your restaurant has high ratings and lots of votes, use that in your marketing. Highlight positive reviews and high ratings in your ads and social media to attract new customers.

8. **Show Off Your Unique Features**:
    - Identify what makes your restaurant special, whether it's a signature dish, a unique dining experience, or exceptional service. Promote these unique features to stand out from the competition.

Using Data for Improvement

9. **Regularly Check Feedback**:
    - Make it a habit to regularly analyze customer feedback and reviews. Look for common themes in the feedback to guide improvements and new ideas.
10. **Use Data to Get Better**:
    - Keep track of important metrics like customer satisfaction scores and sales trends. Use this data to make informed decisions and continuously improve your restaurant.

Community and Social Engagement

11. **Engage with Your Community**:
    - Build a strong relationship with your local community by hosting events, sponsoring local activities, or partnering with other local businesses. This can boost your restaurant's reputation and customer loyalty.
12. **Go Green and Ethical**:
    - Emphasize sustainable and ethical practices, like sourcing local ingredients and implementing eco-friendly policies. This can attract socially conscious customers and set you apart from competitors.

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