**Objective Questions**

**Q1. What is the total no. of tables present in the data?**

Ans. 2 Table (Country Description(Country) & (Raw Data)Restaurant)

**Q2. What is the total no. of attributes present in the data?**

Ans. Total no. of Attributes present in the data is 21 (Using CountA function : =COUNTA('Raw Data'!1:1))

**Q3. How many categorical columns are there in the data?**

Ans. There are 11 Categorical columns – City, CountryCode, CountryName, Cuisines, Currency, Has-Table-booking, Has-Online-delivery, Is-delivering-now, Switch-to-order-menu, Price-range, Rating.

**Q4. The data consists of some inconsistent and missing values so ensure that the data used for further analysis is cleaned?**

Ans. Date Column using the **find and replace** in that column, and Filled the Missing Value with **most occurring cuisines** and there was 9 inconsistent data in the average\_for\_two column so removed it from the dataset**.**

**Q5. Using the LookUp functions, fill up the countries in the original data using the country code?**

Ans. Filled the CountryName using the Original Data using the LOOKUP function. =VLOOKUP(C2,'country description'!$A$2:$B$16,2,0).

**Q6. Create a table to represent the number of restaurants opened in each country?**

Ans. 

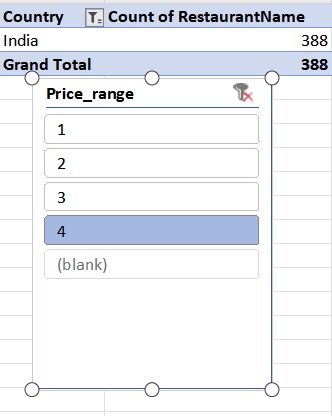
**Q7. Also, the management wants to look at the number of restaurants opened each year, so provide them with something here?**

Ans.

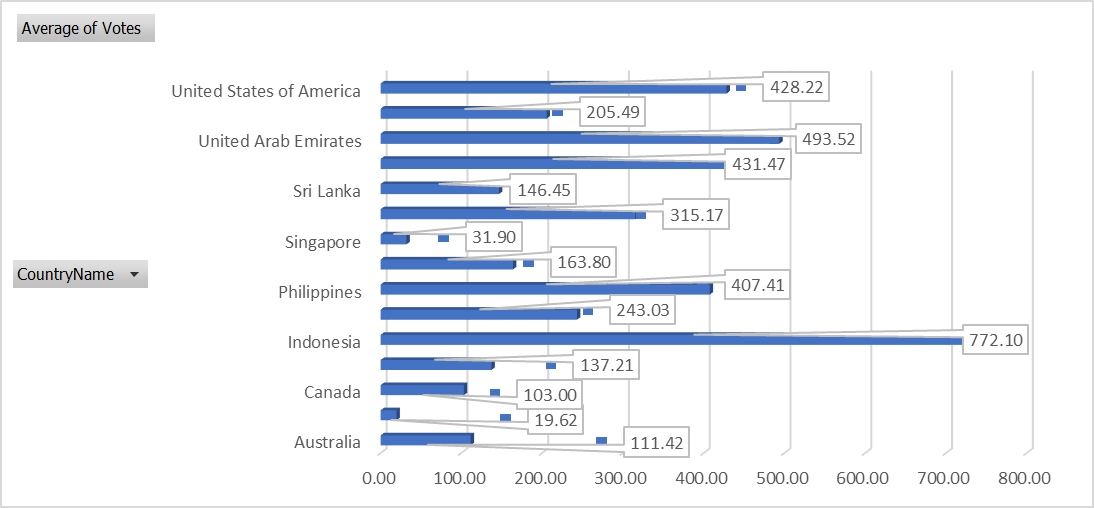


**Q8. What is the total number of restaurants in India in the price range of 4?**

Ans. 388



**Q9. What is the average number of voters for the restaurants in each country according to the data?**Ans.  

**Q10. Calculate the average rating for all the restaurants that have price\_range < 4 and provide online delivery. Use only the “IF” function, Logical Operators, and Aggregation functions to solve this problem. [Note: Don’t use Conditional aggregation in this question.]**

Ans. Created New Column (Average Rating) to use Logical Operation in order to calculate the Average Rating of the Restaurant.

=IF(AND(Q2<4,N2="Yes"),U2,"") To filter the column having price range less than 4 and providing online delivery.

=AVERAGE('Raw Data'!$W$2:$W$9552) To get the Average Rating 3.27381151

**Q11. Using Conditional formatting highlight the rows of restaurants that are located in the countries or cities that you’ve suggested to the management for opening new restaurants.**

**Ans.** HOME -> Conditional formatting -> New Rule -> Use a formula only cells that contain

=India, Singapore, Canada, Australia, Sri Lanka, United Arab Emirates, Indonesia.

In this I select entire row whose Country Name= India, Singapore, Canada, Australia, Sri Lanka, United Arab Emirates, Indonesia.



**Q12. Create a new customized price column that consists of the abbreviation/symbol of the currency along with the Average\_cost\_for\_two value. [Use string operations to do this task]**

Ans. Created a new column Average\_Cost and using the concatenate and string function executed the formula=CONCATENATE(S3," ",MID(L3,FIND("(",L3)+1,FIND(")",L3)-FIND("(",L3)-1))

**Q13. How can you create an array formula in Excel or Google Sheets to count the number of restaurants listed that do not offer online delivery, are in the lowest price range, and have an average cost for two people less than or equal to 250 Indian Rupees?**

Ans. =SUMPRODUCT(('Raw Data'!$N$187:$N$9394 = "No") \* ('Raw Data'!$Q$187:$Q$9394 = 1) \* ('Raw Data'!$U$187:$U$9394 <= 250))

Where N is Has-Online-delivery,

Q is Price-Range and

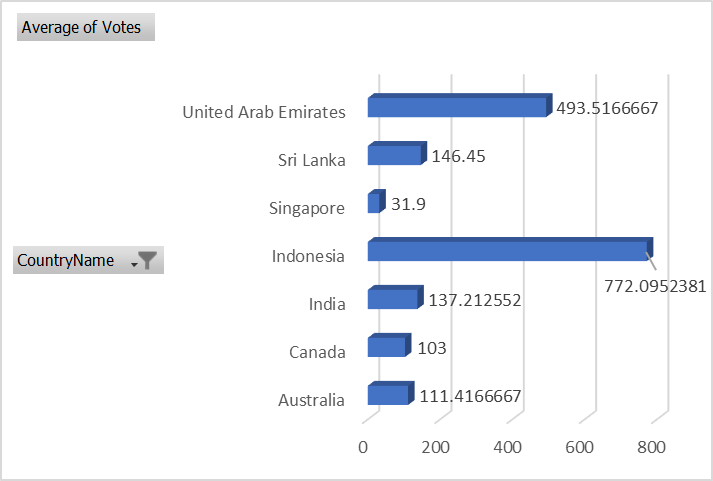
U is Average-cost-for-two converted in Rs .

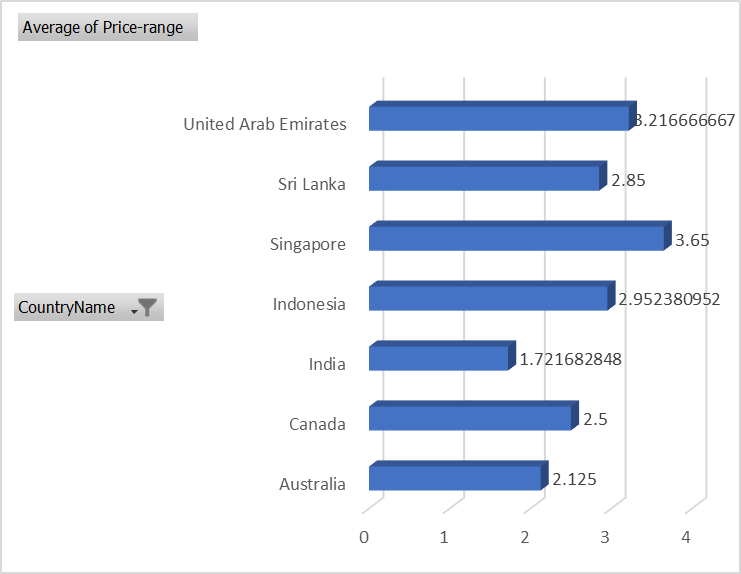
**Subjective Questions**

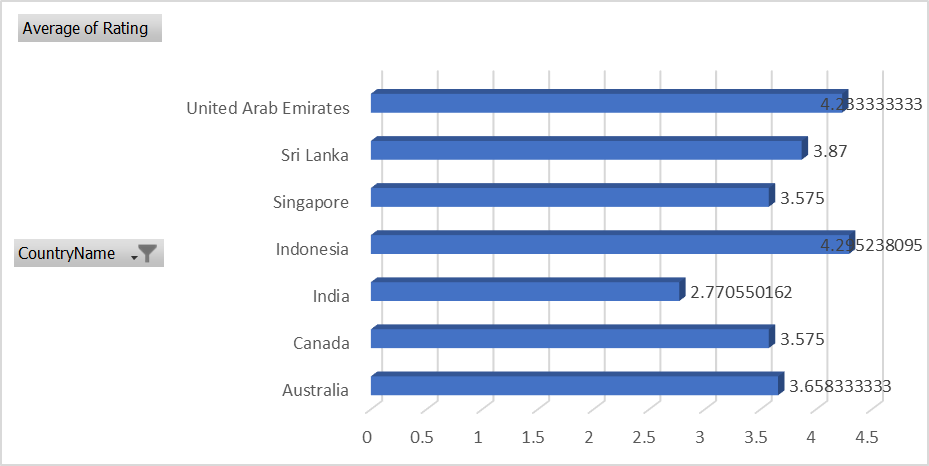
**Q1. Suggest a few countries where the team can open newer restaurants with lesser competition. Which visualization/technique will you use here to justify the suggestions?**

**Ans.** 



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* **Considered RestaurantID count, Average of Votes, Average of Price Range, Average of Rating.**

**Description :**

1. To check the no. of restaurants opened in each country.
2. Rows have CountryName and Values have Count of RestaurantID, Average of Votes, Average of Price-Range, Average of Rating.
3. Sorted the data according to Count of RestaurantID to check the no. of restaurants with less no. of restaurants opened. So, the countries are Canada, Singapore, Sri Lanka, Indonesia, Australia, United Arab Emirates, South Africa.
4. The Average of Average of Votes is 267, So I will pick 2 countries where people with high votes want new restaurants to be opened. We will Select Indonesia and United Arab Emirates (Because the Average Price-Range is high).
5. The Average of Average of Price-Range is 2.91 so I have marked the rows as red and yellow. Red indicates Average of Price of that country is less than 2.91 whereas Yellow indicates Average of Price of that country is greater than 2.91. We will select India and Singapore because the review is lesswhich means the society need better quality. So, We can conclude that opening new restaurants focusing on the quality would be in our favour.
6. The Average of Average of Review is 3.95 so I have marked the rows as red which has value Less than 3.95. Srilanka, Australia, Singapore, India are country which has very less reviews which indicate for opening new restaurants with better quality or as per the demand of the customers.
7. My final choice of Countries are Canada, Indonesia, United Arab Emirates, India, Singapore, Australia, Srilanka.

**Q2. Come up with the names of States and cities in the suggested countries suitable for opening restaurants.**



Ans. **APPROACH:**

**Canada:** Considering Vote counts greater than Average  
**(Chatham Kent, Vineland Station)**

**Sri Lanka:** The Restaurant Count is low and high votes counts.  
**(Colombo)**

**Singapore:** The Count of restaurants is low and low reviews.

**Indonesia:** The top 3 states with the higher count of votes

**(Bogor, Tangerang, Jakarta)**

**Australia:** High Votes with less average rating.

**(Phillip Island, Montville, Palm Cove)**

**United Arab Emirates:** Considering vote count higher than the Average

**Dubai** The sum of votes is high

**India:** Considering restaurants counts higher than average, vote counts higher than average and rating less than average.

**(Gurgaon, Faridabad, Varanasi, Mohali, Bangalore, Ghaziabad, Indore, Secunderabad, Ranchi, Puducherry, Chandigarh, Mysore, Bhubaneshwar, Panchkula, Ahmedabad, Chennai, Hyderabad, Jaipur, Kolkata, Pune)**

**INSIGHTS:**

**Canada**

* Chatham Kent, Vineland Station: Focus on these areas due to above-average vote counts. Potential for growth where high votes indicate strong interest.

**Sri Lanka**

* Colombo: Despite a high vote count, the restaurant count is low. This suggests a competitive market with potential for new entrants offering high quality.

**Singapore**

* Low Review Areas: Restaurants with low reviews suggest a need for higher quality or better value options. Target areas with lower competition and low reviews.

**Indonesia**

* Bogor: High votes but low ratings indicate a market for higher quality, moderate-priced dining options.
* Tangerang: High votes with a high price range present an opportunity for moderate pricing to capture market share.
* Jakarta: High votes suggest a large audience base; focus on quality to stand out.

**Australia**

* Phillip Island & Montville: High votes with low reviews point to opportunities for new, high-quality restaurants.
* Palm Cove: High audience presence indicates a competitive market, but there’s potential for high-quality offerings.

**United Arab Emirates**

* Dubai: High vote count suggests a large, engaged audience; ensure high quality to capitalize on this potential**.**

**India**

* Gurgaon: High votes but low reviews indicate dissatisfaction despite high interest; focus on improving quality.
* Faridabad: Moderate votes with low reviews; good potential for new entrants with better quality.
* Varanasi: Very low count and low reviews; opportunity for new high-quality offerings.
* Mohali & Bangalore: Low count and less competition suggest potential for new high-quality restaurants.
* Ghaziabad, Indore, Ranchi, Puducherry, Chandigarh, Mysore, Bhubaneswar: Low reviews and less competition point to a need for better quality to capture the market.
* Secunderabad: High audience presence with low restaurant count indicates a gap in the market for new entrants.
* Ahmedabad, Chennai, Hyderabad, Jaipur, Kolkata, Pune: High votes with low restaurant count suggest a strong market presence and potential for new, quality restaurants.

**RECOMMENDATION:**

* Focus on areas with high Votes but low ratings, prioritize improving the quality of food, service, and overall dining experience. This will help differentiate your restaurant and attract more customers.
* **Moderate Pricing in High Vote Areas**: In regions with high votes and high price range, consider offering moderate pricing to attract a broader audience while maintaining quality.
* Markets where there is high votes but low ratings, there is a clear opportunity to introduce better quality offerings and capture dissatisfied customers.
* **Unique Value Proposition: In** competitive markets with high votes, distinguish restaurant with unique offerings, superior service, or innovative concepts to stand out from competitors.
* **High Vote Count:** Consider opening new restaurants in areas with high vote counts, as this indicates a strong market presence and potential customer base.
* **Targeted Marketing:** Use insights from areas with low reviews and high vote counts to tailor your marketing strategies. Highlight improvements, unique features, or special promotions to attract customers in these regions.
* Focus on customer feedback and reviews to make ongoing improvements. Address recurring issues or requests to enhance customer satisfaction.
* Analyze successful competitors in high vote areas to understand what they do well. Use these insights to refine offerings and strategies.

**Q3. According to the countries you suggested, what is the current quality regarding ratings for restaurants that are open there?**

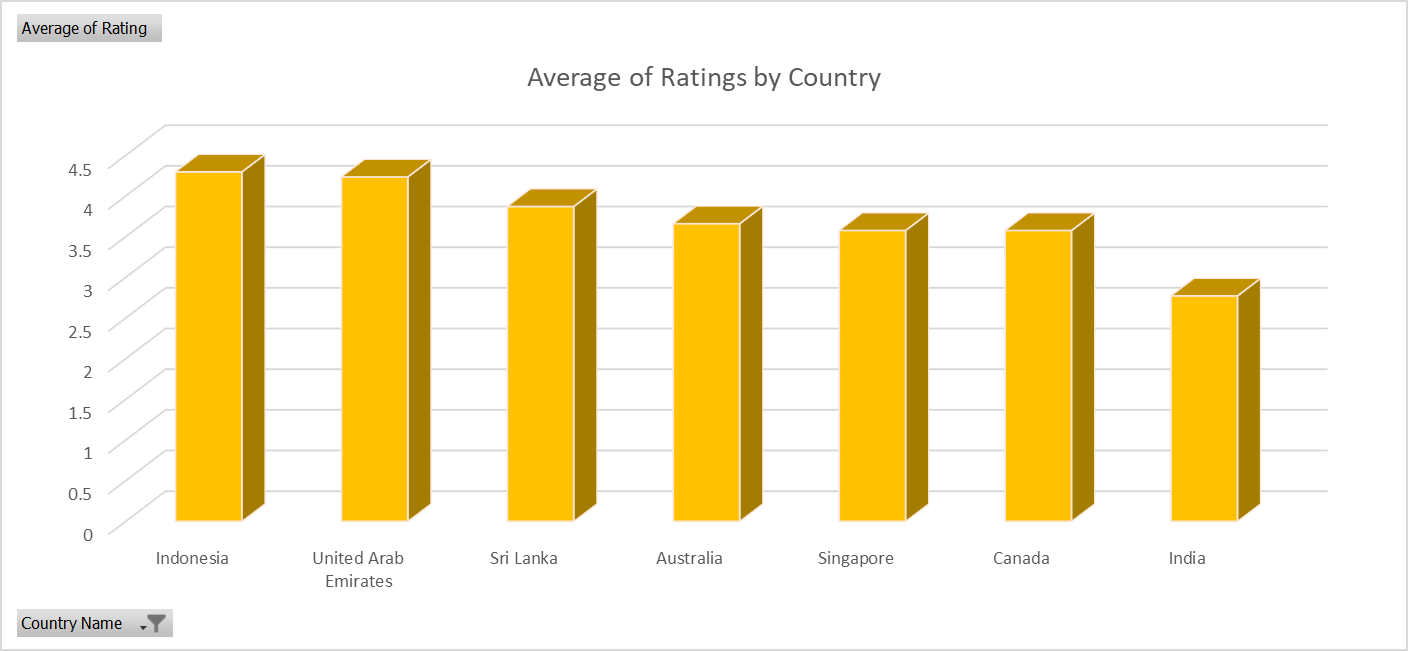
**Ans.**

**INSIGHT**

With the help of column chart it is very clear about the insights of Current quality regarding ratings of restaurants are lowest in India whereas Better in Indonesia and Moderate in all other countries. Need to improve Quality more in India than Other Countries.

Insight: A critical need for targeted improvement efforts within India's restaurant sector, aimed at enhancing quality standards to align more closely with global benchmarks observed in other countries





**Q4. Also, what is the current expenditure on food in the suggested countries, so we can keep our financial expenditure in control?**

**Ans. INSIGHT: India is the highest in term current expenditure on food and Canada is the lowest.**

1. India is the largest consumer in terms of food expenditure, with a high restaurant count and elevated average costs. This indicates that the dietary quality in India is quite low, potentially leading to more health issues among its population. Therefore, it would be prudent to open restaurants that focus more on quality. India is spending the most on restaurant food.
2. Canada and Sri Lanka is the smallest consumer in term of food expenditure.
3. Singapore and United Arab Emirates is having the highest expenditure on food as per capita.

Recommendations:

1. **For India**:
   * **Quality Improvement**: Invest in restaurants that offer higher-quality ingredients and a premium dining experience. Consider health-conscious options and modern dining trends.
   * **Target Urban Areas**: Focus on cities where disposable income is higher, and customer are more willing to spend on dining out.
2. **For Canada**:
   * **Affordable Dining Options**: Introducing cost-effective dining solutions or that cater to budget-conscious customers while providing a quality dining experience.
   * **Highlight Value:** Market affordable and good-value dining options to attract occasional diners.

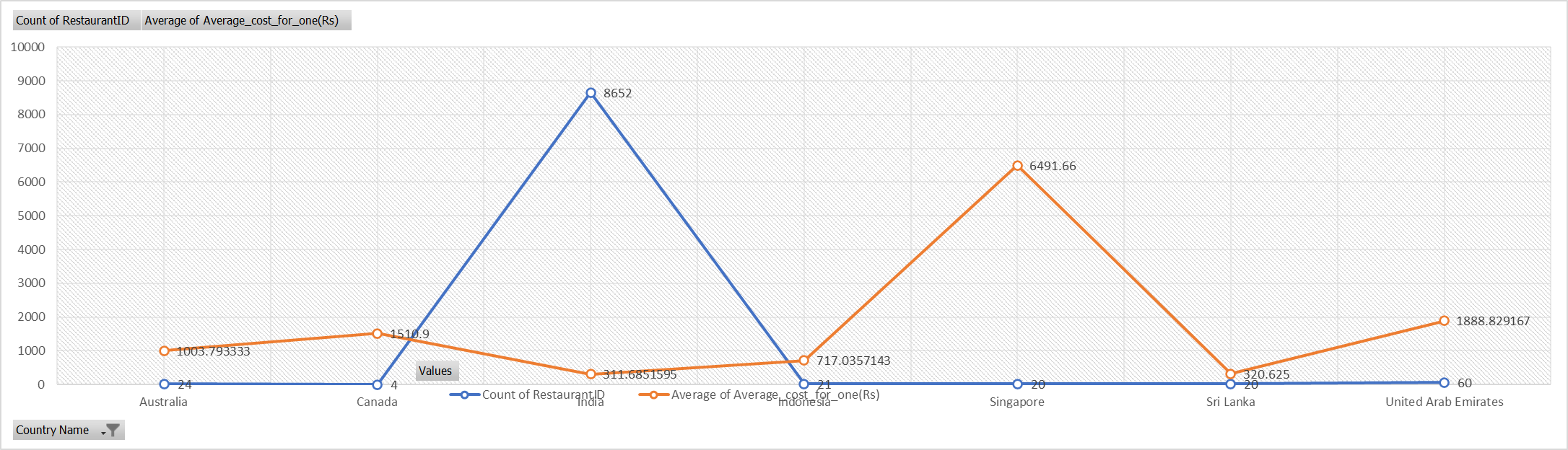
**For Sri Lanka:**

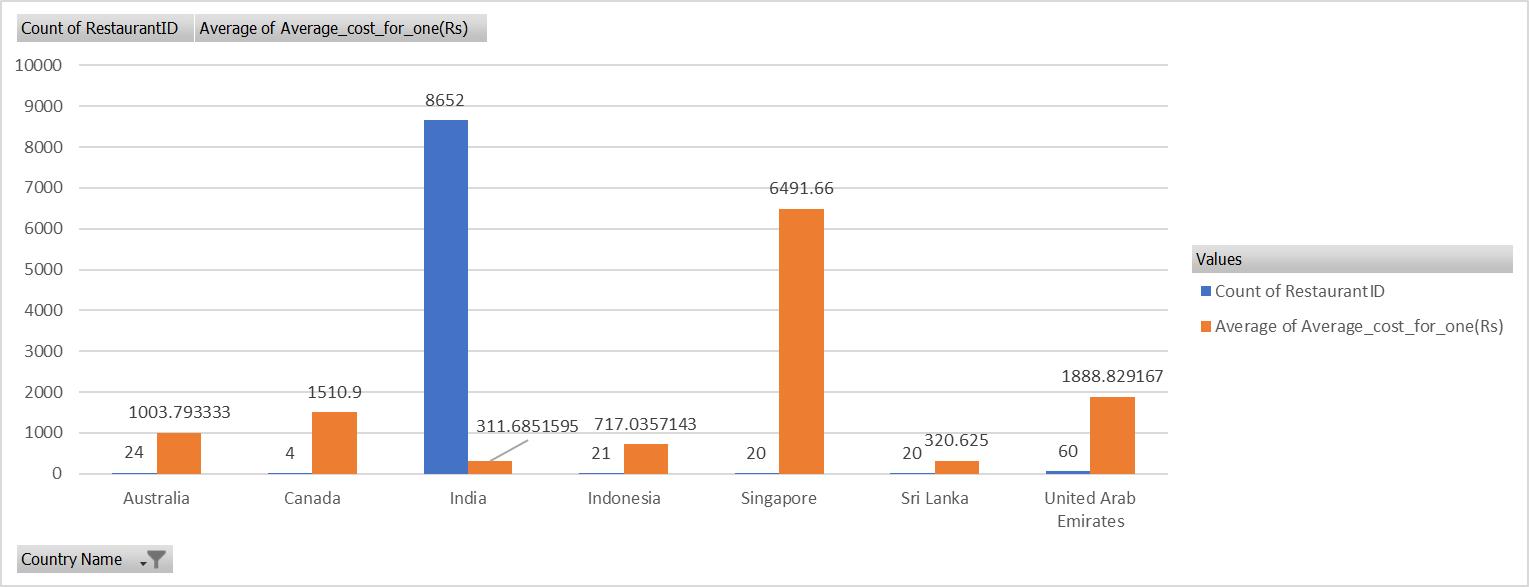
* **Offer Variety:** Provide budget-friendly to mid-range dining options.
* **Attract Tourists:** Create dining experiences that appeal to both tourists and locals.

**Cross-Market Strategies:**

* **Focus on Health:** Include healthy and wellness-focused menu options in all markets.
* **Customize Offerings:** Adjust your restaurant’s style and prices to fit local tastes and economic conditions.







**Q5. Come up with the names of restaurants from the recommended states that are our biggest competitors and also those that are rated in the lower brackets, i.e. 1-2 or 2-3.**

**Ans.**

**APPROACH:**

* Looked through the dataset to identify cities or states with a relatively low number of restaurants.
* Computed the average rating for restaurants in each city.
* Filter out restaurants with ratings higher than the city’s average.
* Used conditional formatting to highlight ratings in your dataset.
* Used formatting to quickly identify which high-rated restaurants could impact your market presence and which low-rated ones are significant due to their location.
* Focused on high-rated competitors as benchmarks and low-rated ones in low-count areas for potential opportunities.

**INSIGHTS:**

* **India**: The majority of low-rated restaurants are concentrated in certain cities like Ghaziabad and Varanasi. For instance, Ghaziabad has several restaurants with ratings in the lower brackets, including Pind Balluchi (1.8) and Let's Noodle (2.6). Varanasi also has a few restaurants with ratings in the lower bracket, such as Chrystal Bowl Restaurant (3.3). Cities like Gurgaon, Bangalore, and Chennai have numerous high-rated restaurants. For example, Gurgaon has many high-rated restaurants like Prankster (4.8) and Manhattan Brewery & Bar Exchange (4.6).
* **Sri Lanka**: Colombo is the main city with lower-rated restaurants, including Queen's Cafe (2.5) and Elite Indian Restaurant (2.4).
* **Australia**: Poets Cafe in Montville is noted with a lower rating of 2.4.
* **Sri Lanka**: Ministry of Crab (4.9) in Colombo stands out as a high-rated competitor.
* **Indonesia**: Jakarta features several top-rated restaurants, including Sushi Masa (4.9).

**RECOMMENDATION**:

**Focus on Areas with Low Competition**

* **Target Low-rated Areas**: Consider market entry or expansion in cities with low-rated competitors.
* **Enhance Offerings**: Improve your service or product quality to stand out where current options are subpar.

**Leverage High-rated Competitors**

* **Benchmarking**: Use top-rated restaurants as quality and service benchmarks.
* **Competitive Analysis**: Study successful elements of high-rated competitors and integrate them into your strategy.

**Monitor and Address Customer Feedback**

* **Review Analysis**: Analyze reviews of both low and high-rated competitors to identify and address common issues.

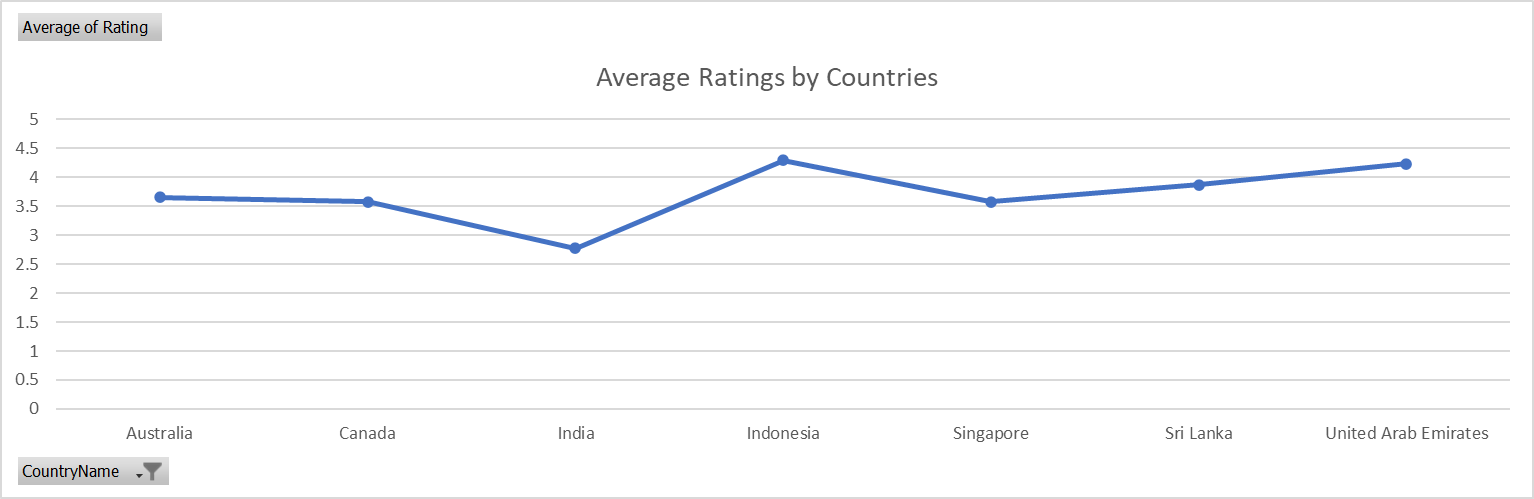
**Strategic Marketing**

* **Promote Strengths**: Highlight your superior quality, customer service, or unique dining experiences in competitive areas.
* **Engage Locally**: Implement local marketing strategies, host events, and engage with **local influencers** to build brand presence in targeted cities.

Top of Form

Bottom of Form



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**Q6. Which cuisines should we focus on in the newer restaurants to get better feedback? Does the choice of cuisines affect the restaurant ratings?**

**Ans.**

**INSIGHT: To get better feedback we should consider and focus on different different cuisines as per the country.**

The cuisine offered by a restaurant significantly impacts its overall revenue, as certain cuisines are rated higher or lower depending on the region or country. Different countries have varying taste preferences, so adapting the menu to fit local tastes can be highly beneficial. For instance, Indian food is highly rated in India but may not receive the same level of appreciation in other countries.

|  |  |
| --- | --- |
|  | **Count of Cuisines** |
| **India** | **8652** |
| **United States of America** | **434** |
| **United Kingdom** | **80** |
| **Brazil** | **60** |
| **South Africa** | **60** |
| **United Arab Emirates** | **60** |
| **New Zealand** | **40** |
| **Turkey** | **34** |
| **Australia** | **24** |
| **Philippines** | **22** |
| **Indonesia** | **21** |
| **Sri Lanka** | **20** |
| **Singapore** | **20** |
| **Qatar** | **20** |
| **Canada** | **4** |
| **Grand Total** | **9551** |



**Q7. According to our current data, should we go for online delivery and table booking? Does that affect the customer’s ratings?**

**Ans.**

**Yes, Online Delivery and Table Booking do affect the customer’s ratings and may have Positive and Negative Impact Too:**

**Positive Impact:**

**Convenience and Efficiency:** Both services add convenience and efficiency, which can lead to higher satisfaction and positive ratings.

**Professionalism:** Offering modern amenities like online booking and delivery can enhance the brand's image of restaurants as professional and customer-focused.

**Error Reduction:** Digital systems can reduce errors in orders and reservations, leading to a smoother customer experience.

**Negative Impact (If not managed):**

**Service Quality:** Poor execution (e.g., late deliveries, booking errors) can lead to dissatisfaction and negative ratings.

**Technical Issues:** Problems with the online systems (e.g., website/app crashes) can frustrate customers.

**Inconsistent Experience**: If the online experience does not match the in-person service quality, it can lead to negative feedback**.**

**ONLINE DELIVERY**

**INSIGHT: According to current data we can suggest that customers are taking interest in Online Delivery. It would be better to go for Online Delivery.**

**Convenience: Customers would appreciate the ability to order from the comfort of their homes, especially during bad weather or busy schedules.**

**Expanded Reach: We can reach customers who may not be able to visit your location physically.**

**Increased Sales: Can boost your sales by catering to a larger audience.**

**Customer Data: Online orders can help you gather data on customer preferences and behavior, which can be useful for marketing and improving services.**



**ONLINE TABLE BOOKING:**

**INSIGHT: According to current data we can suggest that customer are taking interest in Table Booking. It would be better to go for Table Booking.**

**Efficiency: Help to manage and streamline customer flow, reducing waiting times and improves overall dining experience.**

**Planning: Allows for better planning and resource allocation, ensures to handle peak times efficiently.**

**Customer Satisfaction: Customers appreciate the assurance of having a table reserved, especially during busy hours or special occasions.**

**Personalization: Enables you to personalize the dining experience (example: preparing special requests in advance).**



**Q8. Should the team keep the rate of cuisines higher? Will that affect the feedback? According to our data are the rates of cuisines and ratings, correlated?**

**Ans.**

**=CORREL('Raw Data'!W2:W9552,'Raw Data'!U2:U9552)**

**There is a weak correlation between price of cuisines and customers rating. So based on this correlation factor alone, it may not be advisable for the team to focus on keeping higher rates of cuisines to get better ratings.**

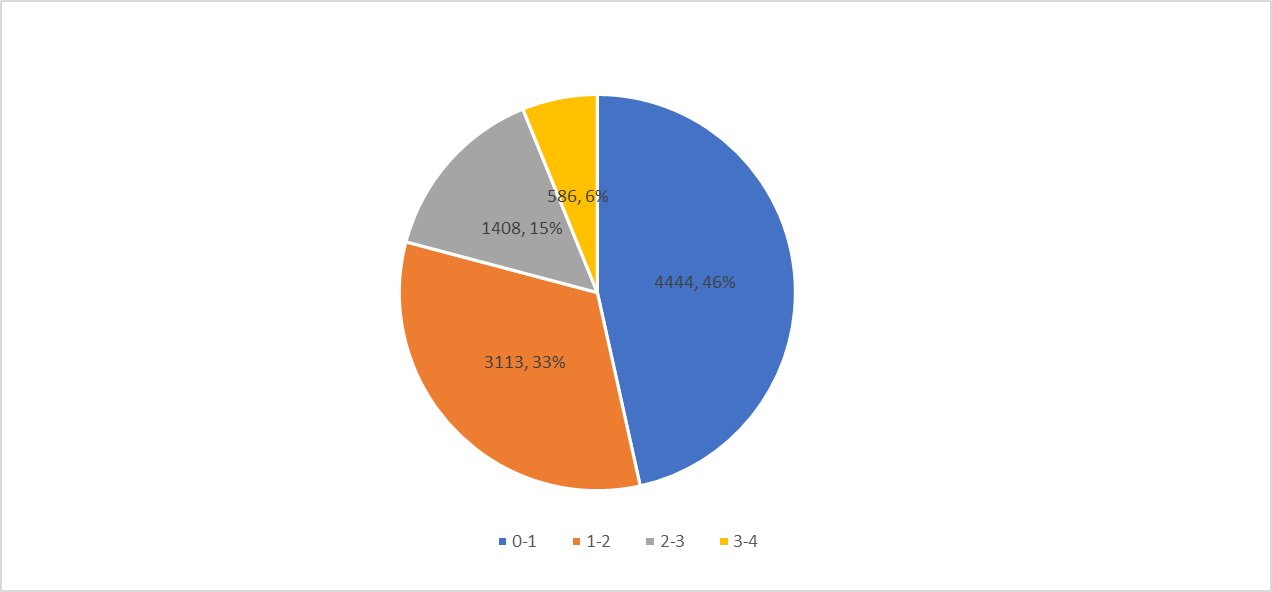
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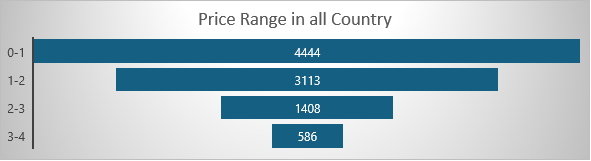
**Q9. What is the distribution of the number of restaurants of different price ranges in all the countries?**

**Ans.**



|  |  |
| --- | --- |
| Range Type | Total |
| 0-1 | **4444** |
| 1-2 | **3113** |
| 2-3 | **1408** |
| 3-4 | **586** |

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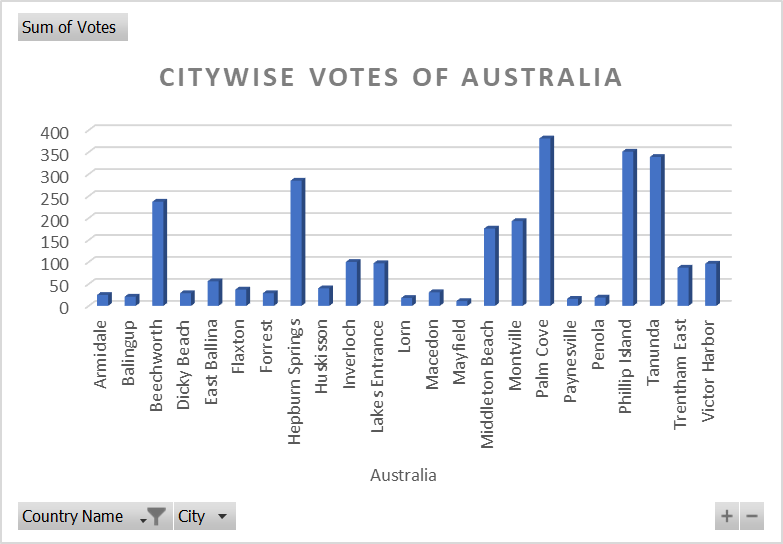
**Q10. Explain your approach in brief for suggesting countries/cities in order to open new restaurants, if the objective and subjective questions would have not been given to assist you. [you have to give bullet pointers in order to answer this question]**

**Ans.**

* Considering the country having rating less than the average rating of all the countries.
* Selecting the cities having more votes than the average votes for each country.
* Selecting the cities having more than the average votes for each country.
* Considering the countries and cities having more votes.
* Online Delivery and Table Booking Availability
* Opening restaurants in Countries and Cities which are having less price and not high price with better quality or better ratings.
* Opening restaurants in countries and cities which are having more price and not less price with better quality or better ratings.
* Easy and friendly of online delivery culture.
* Google rating is affect allot.
* Availability of most selling and buying cuisines.
* Table booking system is available with no extra charge.

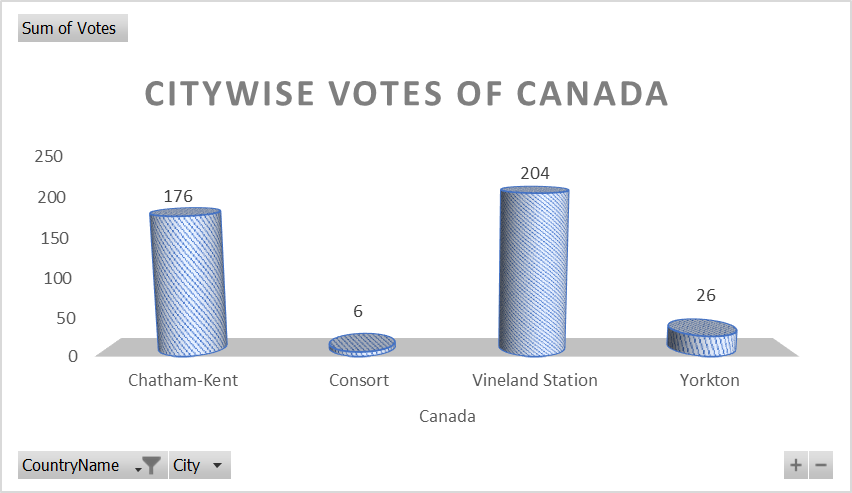


**Australia**

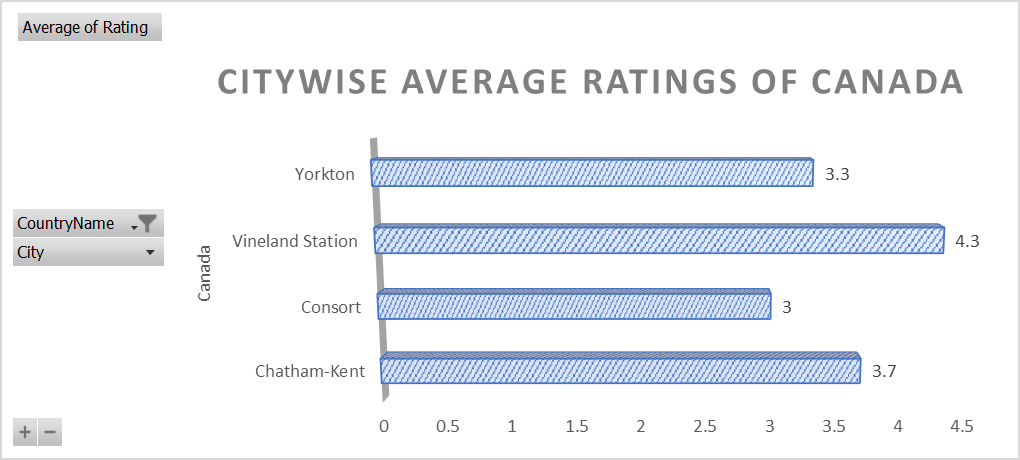
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**Canada**

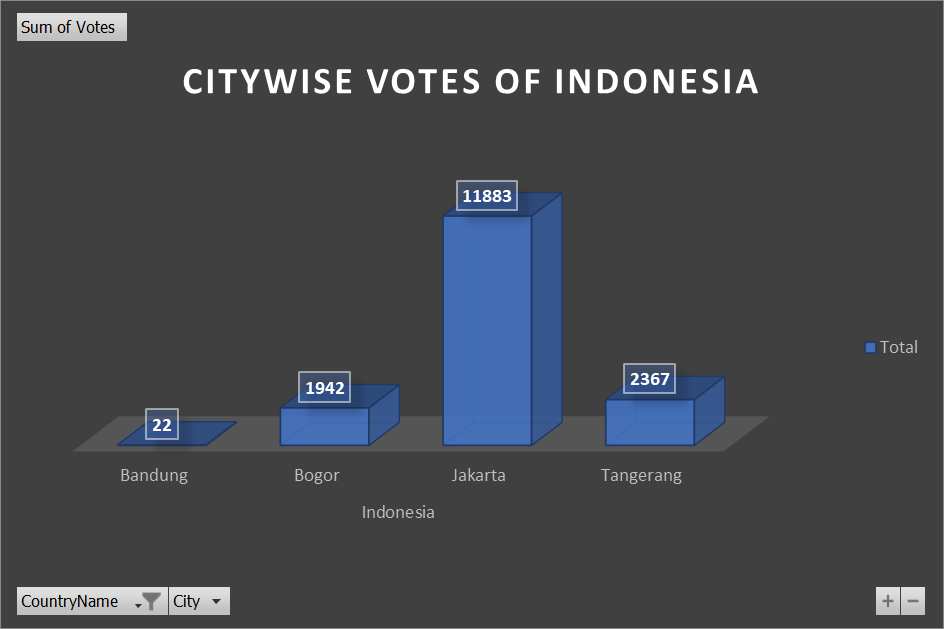
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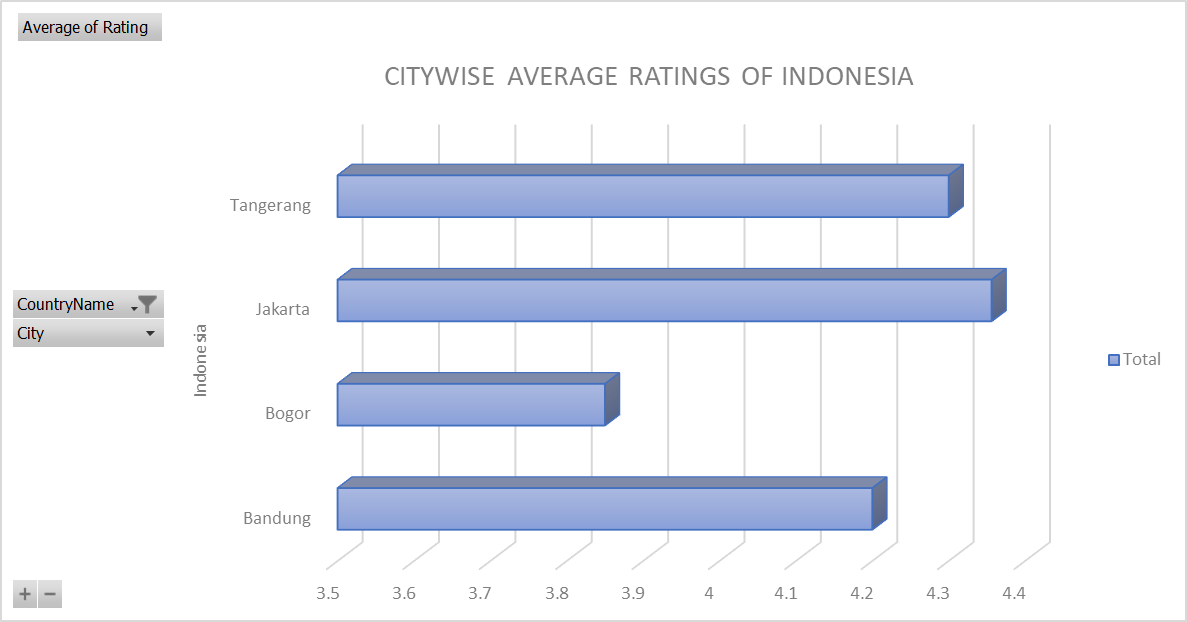
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**Indonesia**



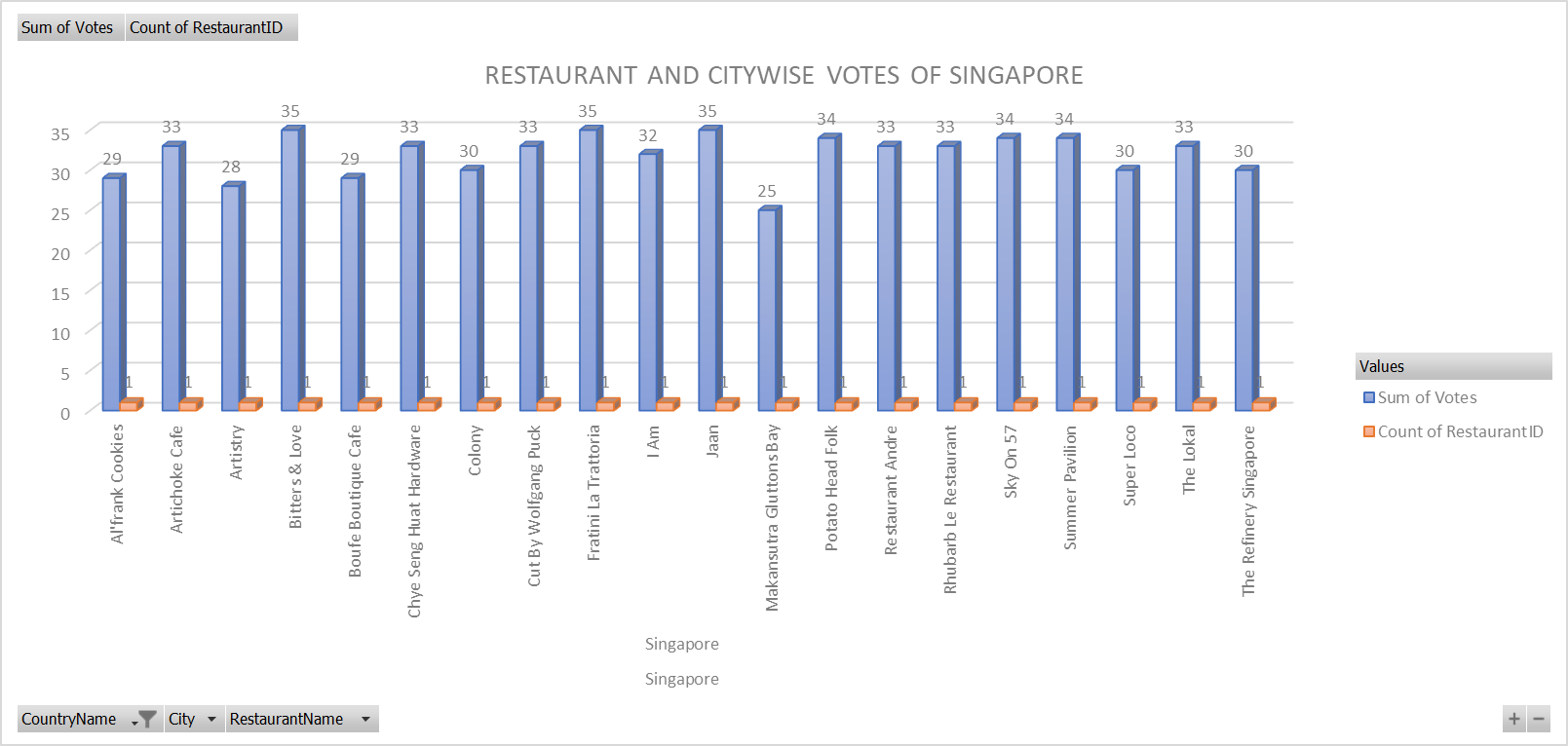
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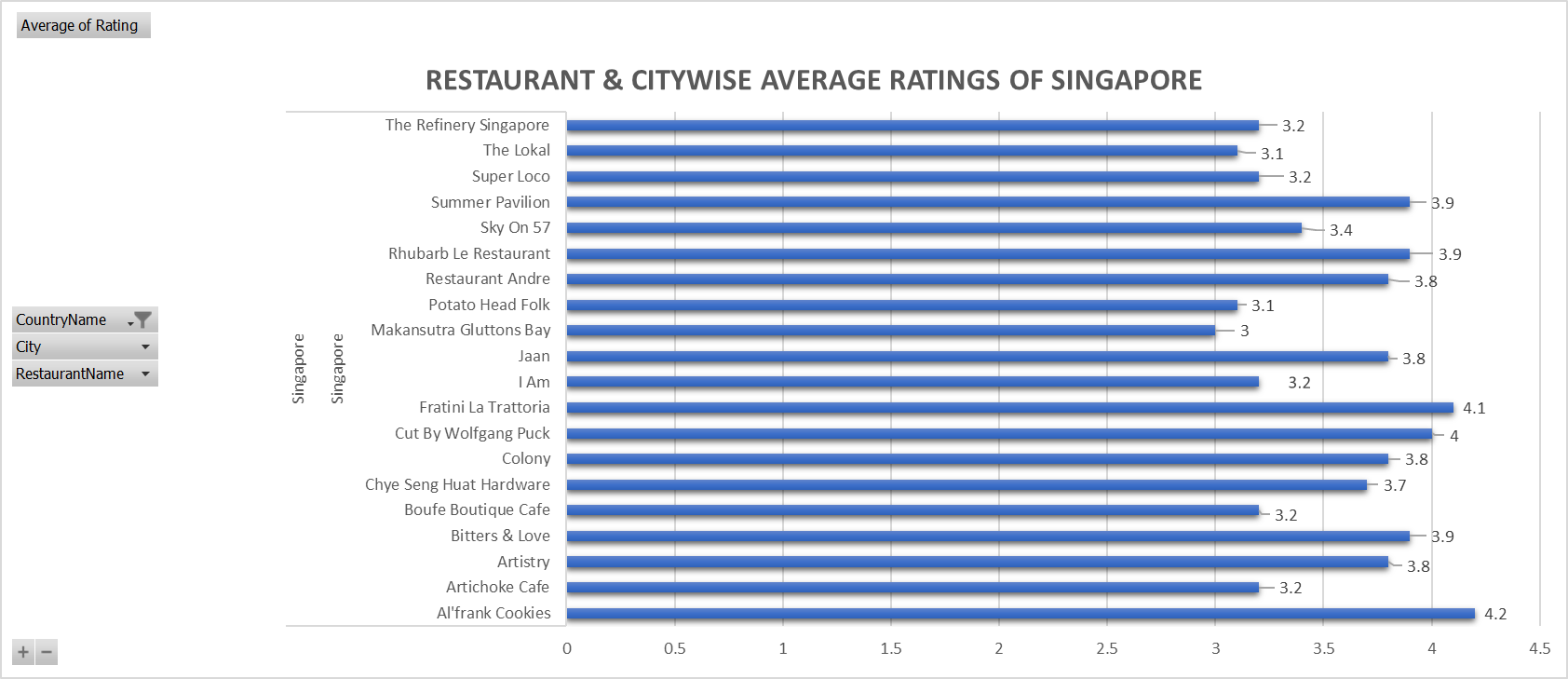
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**Singapore**



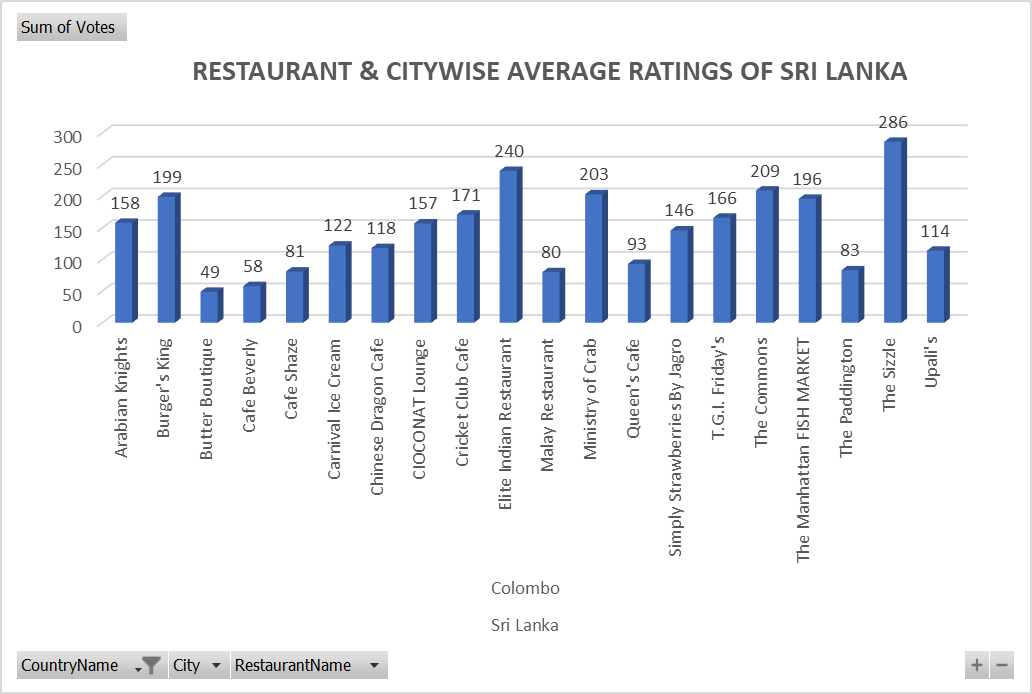
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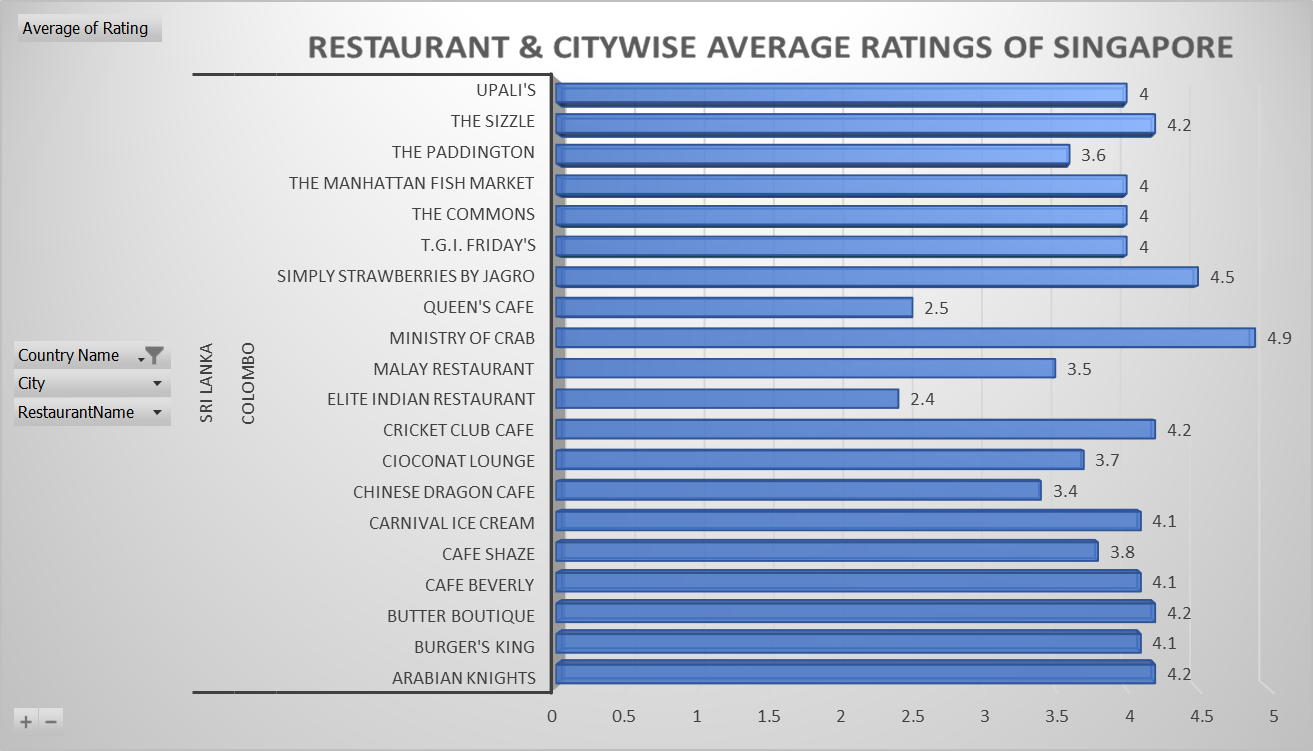
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**Sri Lanka**



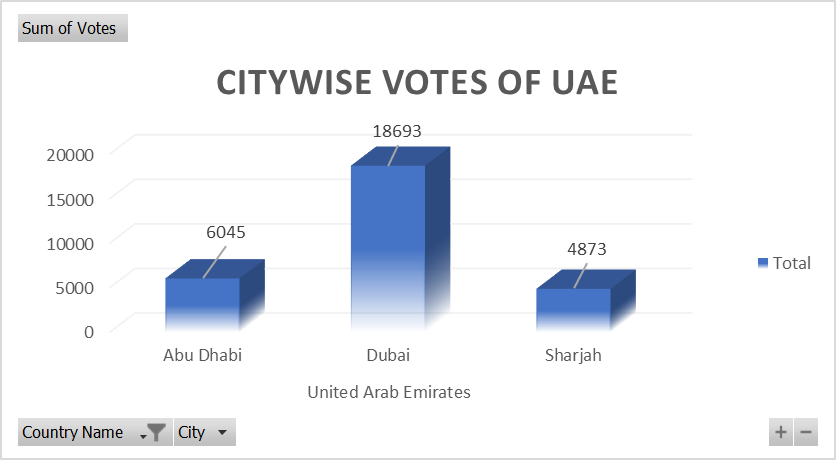
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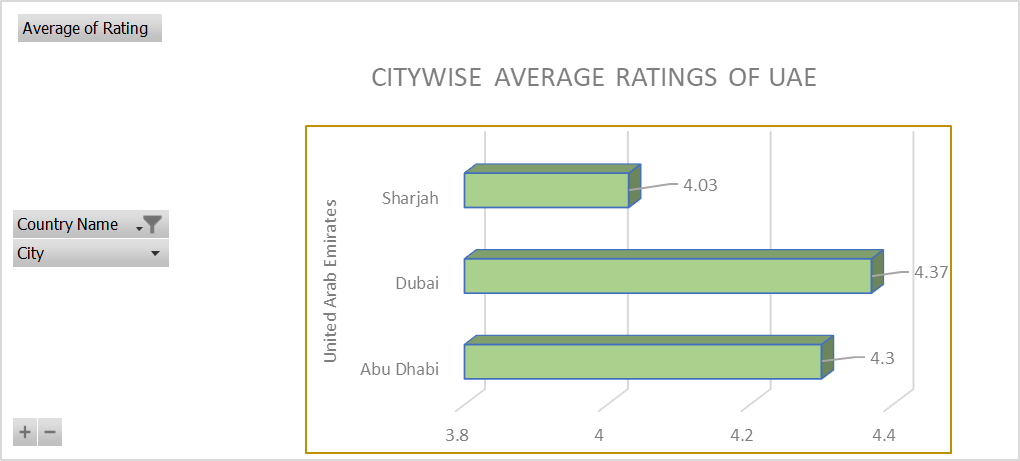
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**UNITED ARAB EMIRATES**



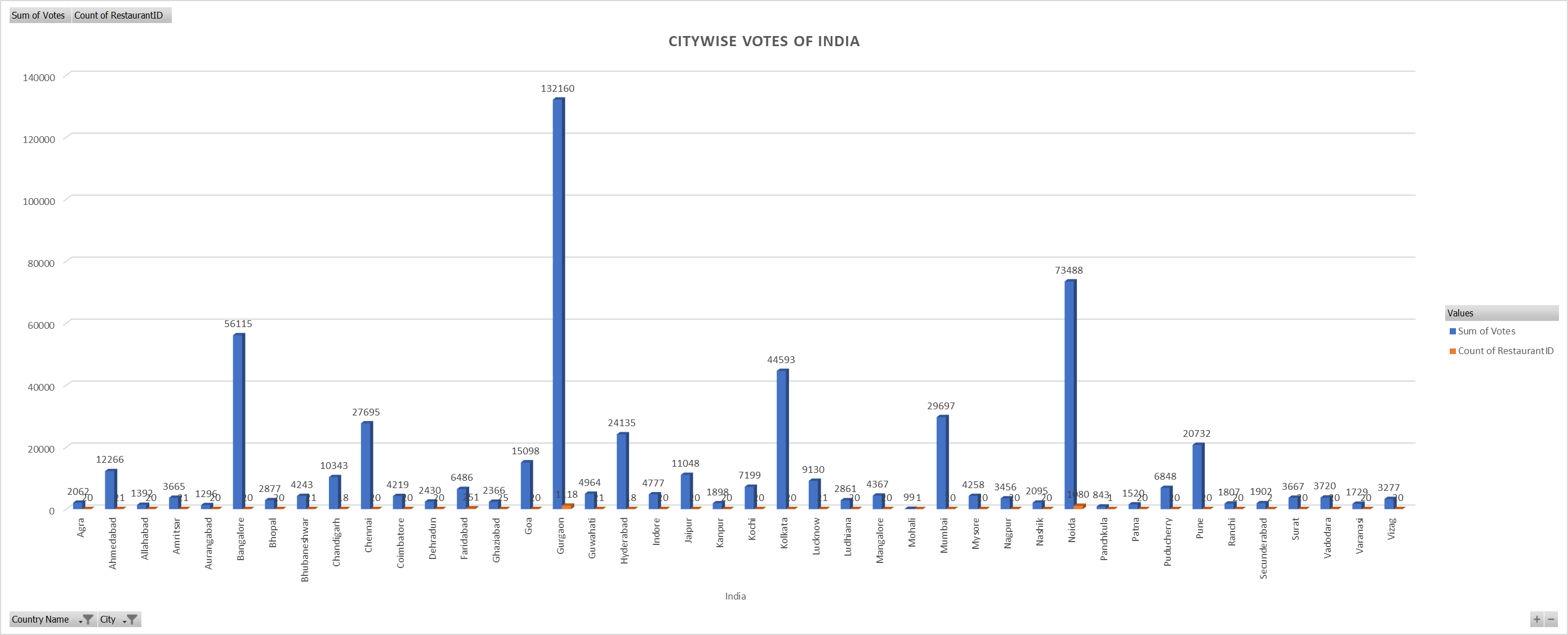
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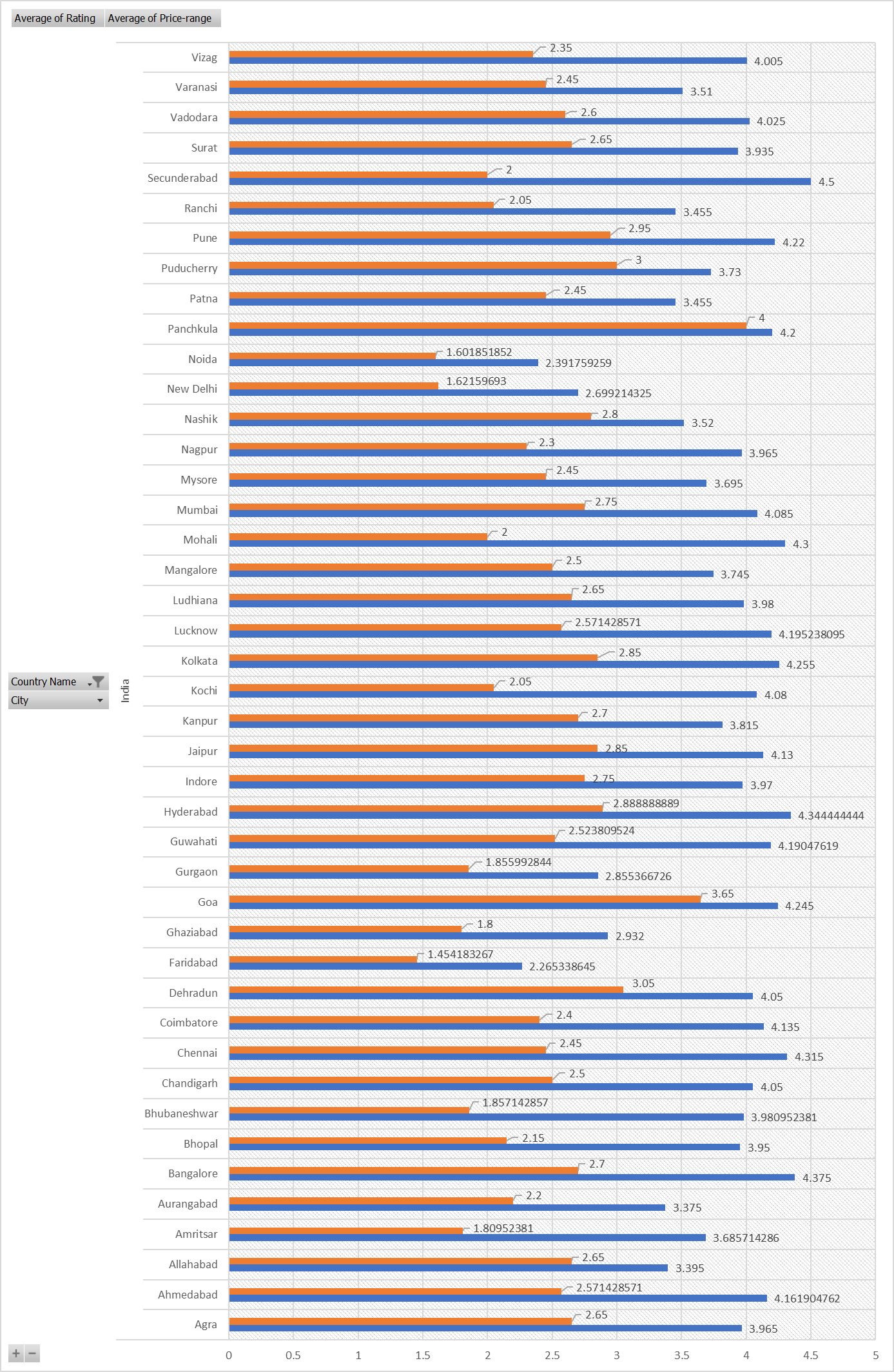
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**INDIA**

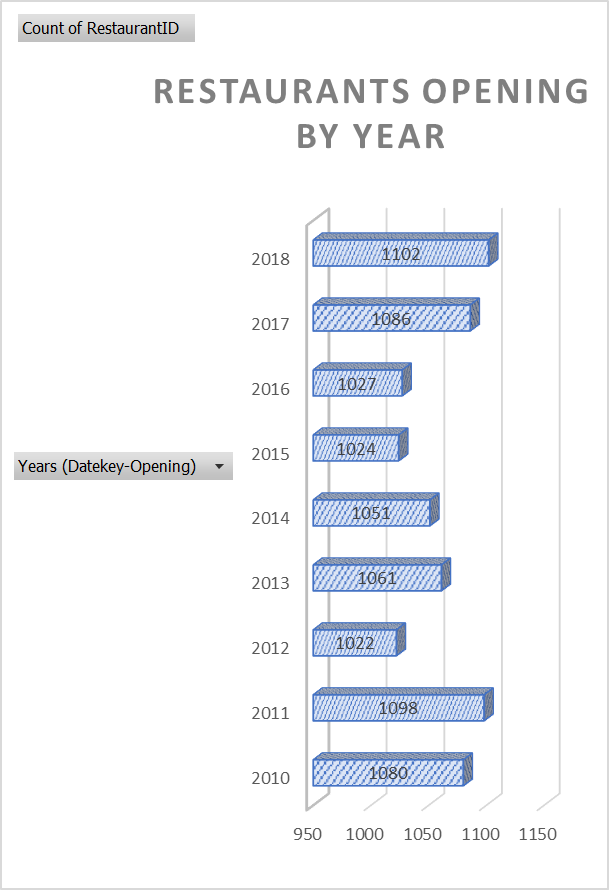


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|  |  |
| --- | --- |
| **Row Labels** | **Count of Has-Table-booking** |
| No | 8393 |
| Yes | 1158 |
| **Grand Total** | **9551** |