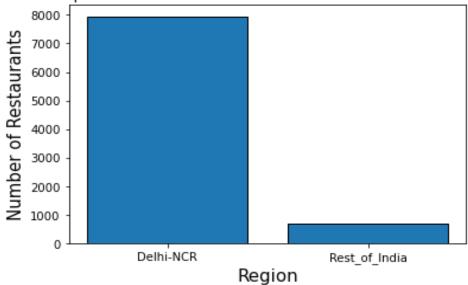
QUESTION 1:

The dataset is highly skewed toward the cities included in Delhi-NCR. So, we will summarize all the other cities in Rest of India while those in New Delhi, Ghaziabad, Noida, Gurgaon, Faridabad to Delhi-NCR. Doing this would make our analysis turn toward Delhi-NCR v Rest of India.

Question 1: part 1: Plot the bar graph of number of restaurants present in Delhi NCR vs Rest of India

Delhi-NCR 7947 Rest of India 705





Conclusion and Justification- From the above data and plotting it is clear that the no. of restaurants in Delhi_NCR is far more than the rest of India as per the data. In Delhi_NCR it comes out to be 7947 and for rest of India no. of restaurants comes out to be only 705.

Question 1: part 2: Find the cuisines which are not present in restaurant of Delhi NCR but present in rest of India. Check using Zomato API whether this cuisines are actually not served in restaurants of Delhi-NCR or just it due to incomplete dataset.

Output: German, Malwani, BBQ, Cajun
The o/p could not be verified as Zomato is not excepting Api Request.

Conclusion and Justification – The above mentioned 4 cuisines which are German, BBQ, Cajun, Malwani are those cuisines which are not present in Delhi NCR but present in rest of India.

Question 1: part 3: Find the top 10 cuisines served by maximum number of restaurants in Delhi NCR and rest of India.

The following cuisines are corresponding to the restaurants in Delhi-NCR:

North Indian 3597 Chinese 2448 Fast Food 1866 Mughlai 933 Bakery 697 South Indian 569 Continental 547 Desserts 542 Street Food 538 Italian 535

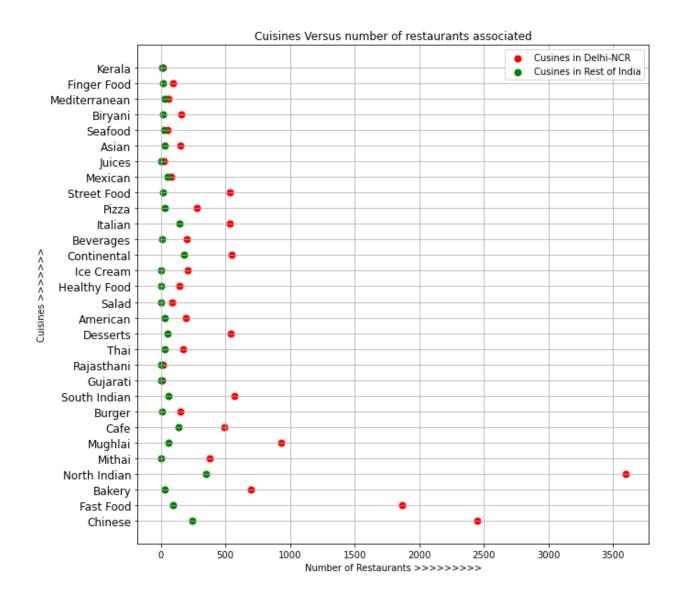
The following cuisines are corresponding to the restaurants in Rest_of_Ind ia:

North Indian 349 Chinese 242 Continental 177 Italian 147 Cafe 136 Fast Food 97 South Indian 62 Mughlai 59 Desserts 55 Mexican 50

Overall Top 10 Cuisines in both Delhi-NCR and Rest-of-India

North Indian 3946 Chinese 2690 Fast Food 1963 Mughlai 992 Bakery 726 Continental 724 Italian 682 South Indian 631 Cafe 627 Desserts 597

Question 1: part 4: Write a short detailed analysis of how cuisine served is different from Del hi NCR to Rest of India. Plot the suitable graph to explain your inference.



Conclusion and Justification- From the above graph it is clear that North-Indian cuisine is most famous in both the regions. I have plotted only those 30 important cuisines which are common in both Delhi-NCR and other states for better analysis.

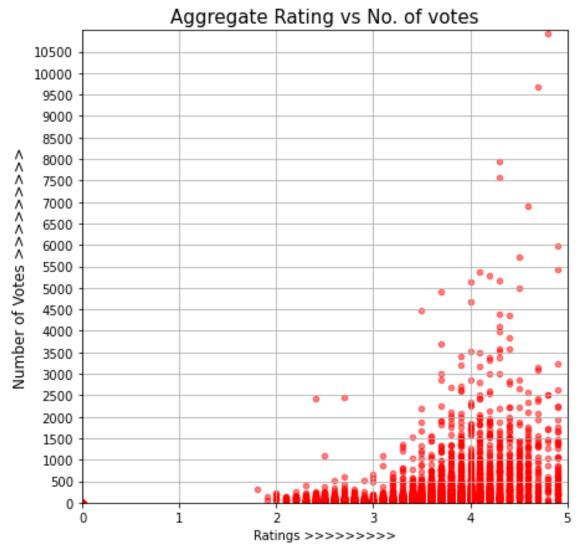
North-Indian cuisines in most famous cuisines in both the regions followed by Chinese cuisines. However in Rest of India North-Indian, Chinese, Continental, Italian and Café cuisines come in the top_5 served cuisines but in Delhi-NCR, North-Indian, Chinese, Fast Food, Mughlai, Bakery cuisines come in top 5 served cuisines.

Also according to dataset German, BBQ, Malwani, Cajun is not served in Delhi-NCR region. There are many more difference between the cuisines when seen according to number of restaurants serving.

QUESTION 2: User Rating of a restaurant plays a crucial role in selecting a restaurant or ordering the food from the restaurant.

Question 2: part 1: Write a short detail analysis of how the rating is affected by restaurant due following features: Plot a suitable graph to explain your inference.

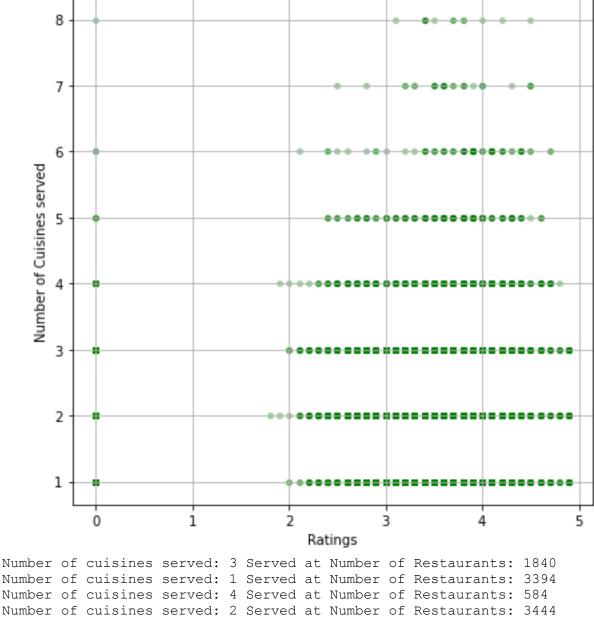
Question 2: part 1: A] Number of Votes given Restaurant



Analysis:

As the number votes increases the aggregate rating also increases for the restaurant. When the votes are less than 2000 there is a variation in the user ratings from 2 to 5, and when the votes are greater than 5000 there are high chance of getting the rating from 4 to 5. There are also some restaurants between 1000 to 2000 votes which has rating from 4 to 5. Overall the analysis is that as the number votes increases the aggregate rating also increases for the restaurant.

Question 2: part 1]: B] Restaurant serving more number of cuisines.



```
Number of cuisines served: 1 Served at Number of Restaurants: 3394
Number of cuisines served: 4 Served at Number of Restaurants: 584
Number of cuisines served: 2 Served at Number of Restaurants: 3444
Number of cuisines served: 5 Served at Number of Restaurants: 164
Number of cuisines served: 6 Served at Number of Restaurants: 74
Number of cuisines served: 7 Served at Number of Restaurants: 28
Number of cuisines served: 8 Served at Number of Restaurants: 14
```

Analysis:

From the graph it seems that providing more number of cuisines will not give much higher ratings to that particular restaurant. Here we can see that the restaurant providing 8 cuisines is not getting the higher rating where if we can see that the restaurant providing 1 or 2 cuisines is getting the average as well as higher rating too, In whole world, there are maximum no. of restaurants (3444) that provides 2 cuisines

and very few restaurants provides the 8 cuisines (14), seems like when a restaurant provides too many cuisines, its focus on the quality of food offered diverges. While restaurants providing fewer cuisines focus on the quality of food to get good aggregate user ratings.

Question 2: part 1]: C] Average Cost of Restaurant

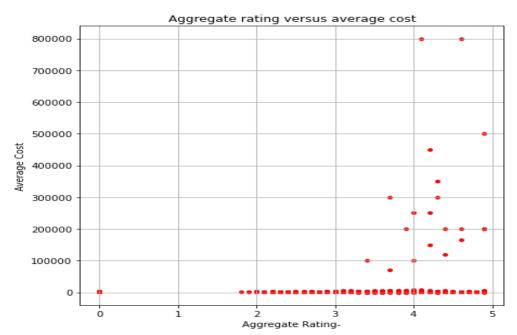


Figure 1 Average Cost 0 to maximum

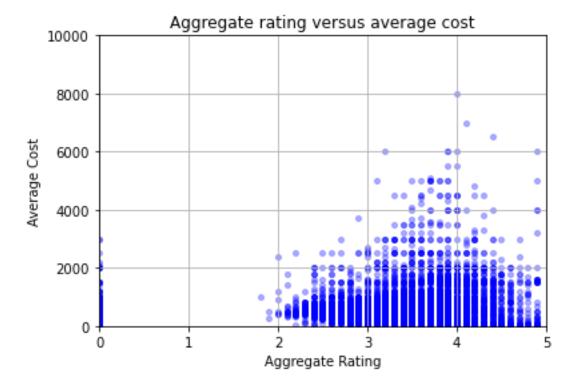


Figure 2 Average Cost 0 to 10000

Analysis:

Here I have plotted the two subplots one with all the values of average cost and second with the average cost up to 10000. In the first subplot it is observed that when the average cost is higher than 1 lakh rating is between 4 and 5. For the second subplot there is a variation in rating when average cost is below the 2000, rating varies from 0 to 5. And if the average cost is greater than 4000 rating varies from 3 to 5. If the average cost is in between 6000 and 8000 the rating is higher with 4 to 5, it seems like, the user is happy when average cost is between 6000 and 8000 with rating greater than 4.

Variation of aggregate rating with restaurants serving some specific cuisines(Top 5)

North Indian
Chinese
Fast Food
Mughlai
Italian

750

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Question 2: part 1]: D] Restaurant serving some specific cuisines

Analysis:

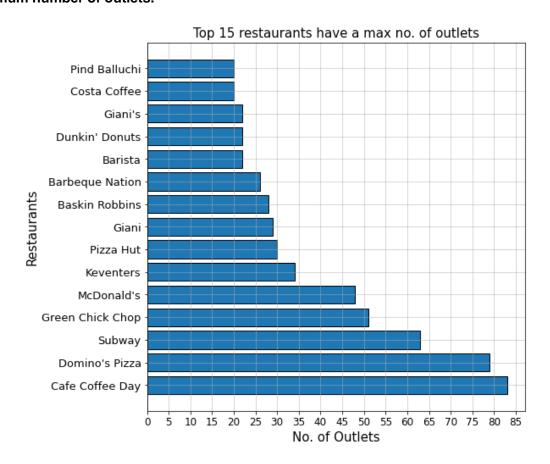
From the above histogram plot, it is clear that North Indian cuisine is the best rated among all the cuisines in all the aggregate ranges. After it comes the Chinese cuisine, it is rated between 3 to 4 maximum numbers of times. Then we have Fast Food, which has been rated between 3 to 4 stars maximum number of times. After these comes Mughlai and Italian cuisines.it seems like people like the Italian cuisine very much because it has a considerable rating between 3 to 4 and 4 to 5 also.

Question 2: part 2]: Find the weighted restaurant rating of each locality and find out the top 10 localities with more weighted restaurant rating? Weighted Restaurant Rating= Σ (number of votes * rating) / Σ (number of votes)

Top 10 localities with more weighted restaurant rating :

Aminabad
West Park
Fort Street
DIFC
Cengkareng
Gíçvea
Venetian Village, Al Maqtaa
Barwa Towers, Al Sadd
Taman Impian Jaya Ancol, Ancol
Kenwood

Question 3: Visualization Question 3: part 1]: Plot the bar graph top 15 restaurants have a maximum number of outlets.



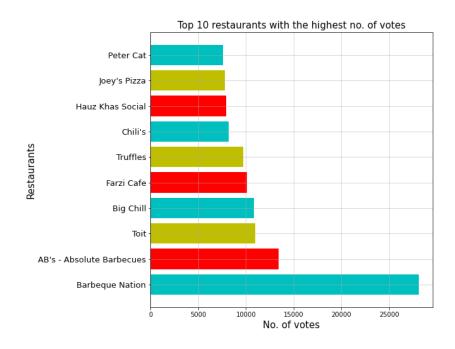
CONCLUSION: Above mentioned data represent the top 15 restaurants which have maximum number of outlets. Cafe Coffee Day has maximum among all those and about 83 in numbers.

Question 2: part 2] Plot the histogram of aggregate rating of restaurant(drop the unrated restaurant).*



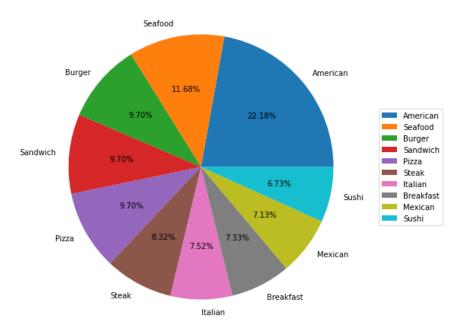
CONCLUSION: This graph represents the aggregated rating of restaurants, which shows that there are more restaurants which get ratings in between 3 to 4.

Question 3: part 3] Plot the bar graph top 10 restaurants in the data with the highest number of votes



CONCLUSION: Above bar graph plot the top 10 restaurants from the data which have highest number of votes. And it is clear the Barbeque Nation has highest votes among all.

Question 3: part 4] Plot the pie graph of top 10 cuisines present in restaurants in the USA.



CONCLUSION: Above pie chart represents top 10 cuisines present in USA with their respective percentages.

Question5] next page

Question 3: part 5] Plot the bubble graph of a number of Restaurants present in the city of India and keeping the weighted restaurant rating of the city in a bubble.

