ZOMATO API PROJECT – CODING NINJAS INDIA

- KESHAV SHARMA

PROBLEM_2:

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

QUESTION 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.

- Number of Votes given Restaurant
- Restaurant serving more number of cuisines.
- Average Cost of Restaurant
- Restaurant serving some specific cuisines.

ANSWER: -

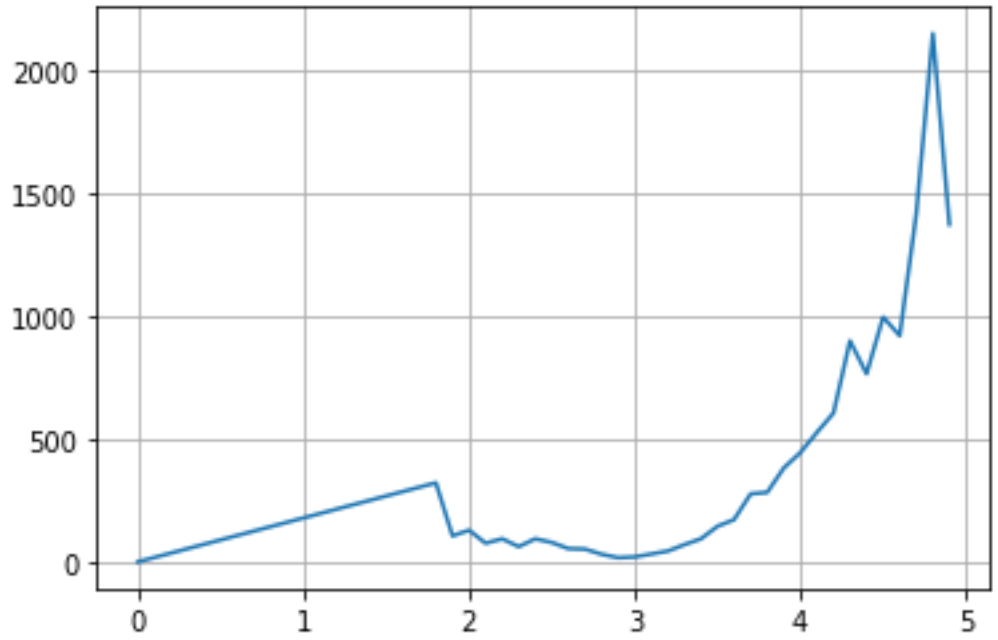
1. Number of Votes given Restaurant.

For getting the information about rating and how many votes restaurants might have, I have applied data compression technique as number of votes can be so huge for a particular restaurant. To compress the data I have first added all the votes by the rating and maintain total restaurants which will help me to figure out the average voting for each restaurants.

So first I have made one dictionary which will hold the rating as key and total number of votes & restaurant count as a value i.e a list 0th index is total number of votes and 1st restaurant count. Once I get these detail I can make average by

doing total_votes//no_restaurants so for each restaurants we will get the compressed voting numbers.

After ploting in the graph we can see that those restaurants who are getting most votes, they usually are having good rating i.e 4-5 or above and voting range is 500 - 2000. Now if we see the low rating then we can find that there are less voting as compare to 4-5 rating range voting.

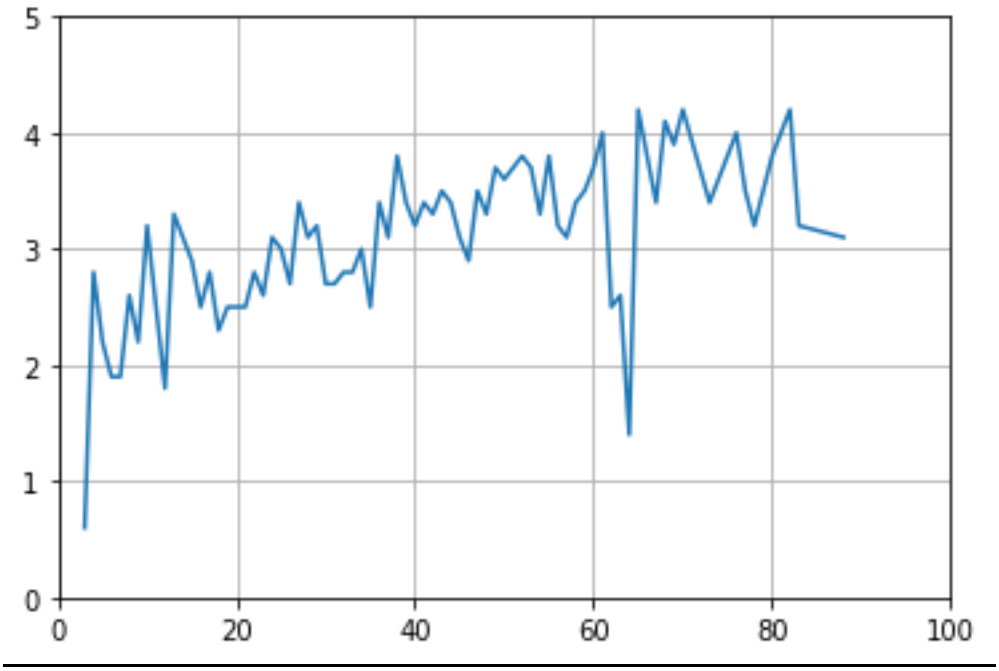


From the above information I can say that if we go with large number of voting for a restaurant, they are more bound towards having a better food quality too.

2. Restaurant serving more number of cuisines.

I have applied the same technique just in this case and for below cases I haven't used any function to get the desired result. Here I have twicked the scenario little because we need to check with the number of cuisines so I

made number of cuisines as key and I have stored all the rating given to particular number of cuisines and side by side I have stored the number of restaurants. After doing this, I am finding the avgerage rating for that particular number of cuisines right. And rating will lie between the min rating and max rating got by number of cuisines. To find out the average rating I have used total_rating/restaurant_count. After ploting the detail in the graph we can notice the higher number of cuisines offered more is the rating. 60 - 80 range has got the higher ratings. But still there are some restaurants after offering ample number of cuisines still they couldn't get good rating. So it will be better to go with more number cuisines offered by a restaurant.

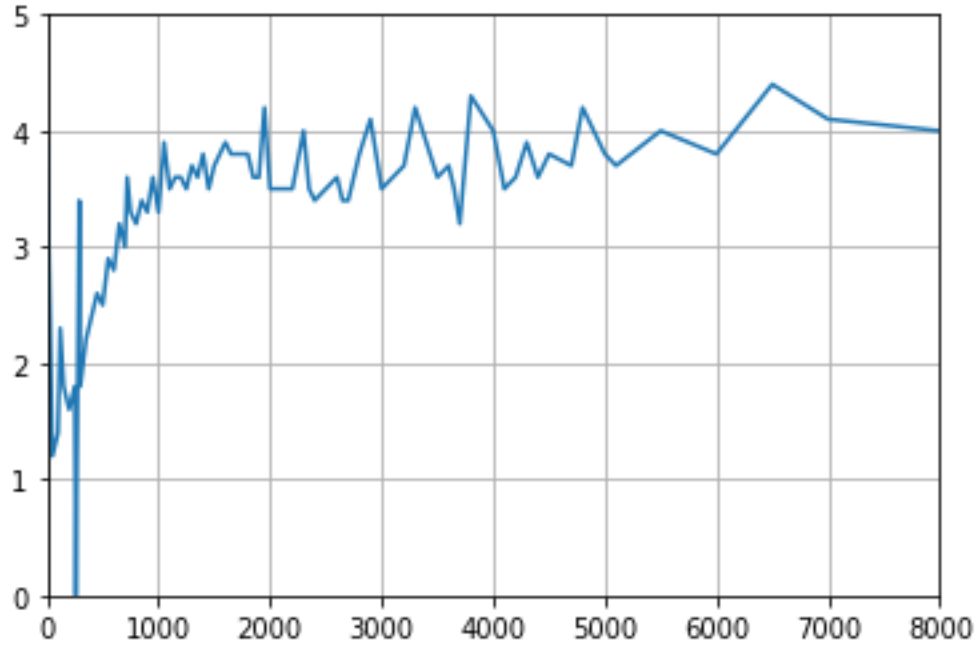


3. Average Cost of Restaurant.

As I have mentioned earlier, I have applied the same logic so I am not re-iterating the same thing. Here I have used cost of two as the key and store all the ratings for a particular cost and side by side I have store the count of restaurants inorder to get the average. Once all the data stored in the dictionary I have found the average by total_ratings/restaurant_counts. After ploting the graph it is indicating that more cost of two more is the rating of the

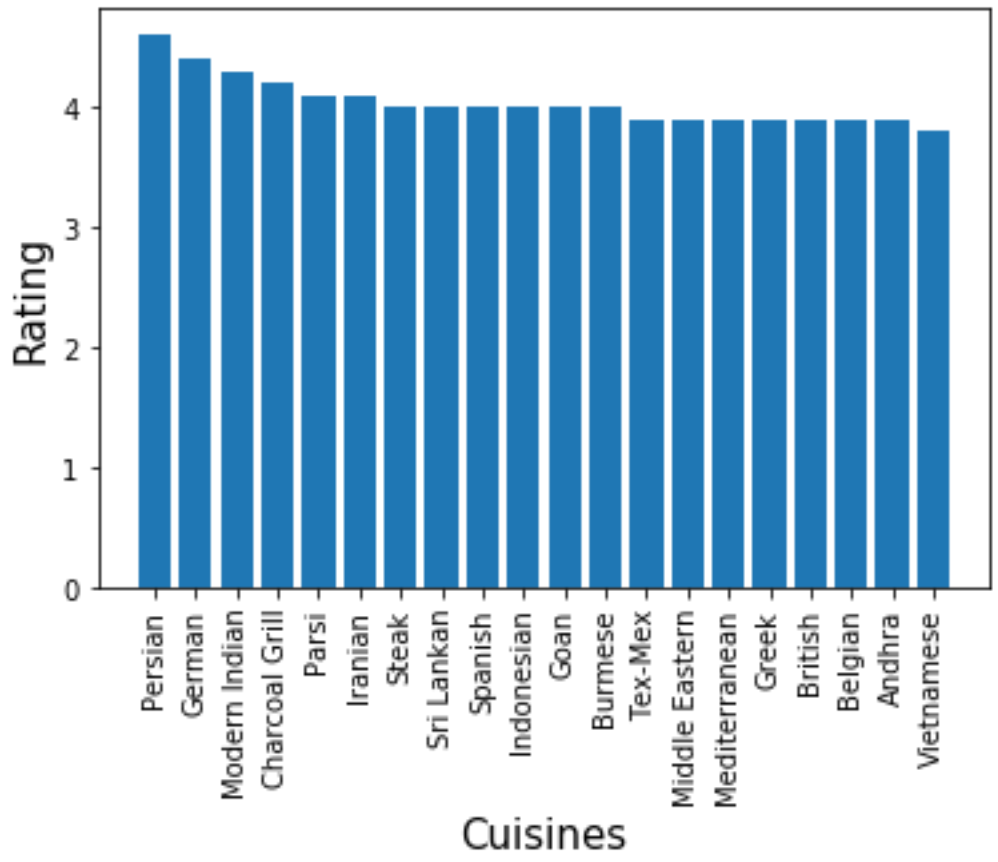
restaurant. When cost of two gets more than 2000 the rating becomes stagnant i.e we can say that there is no big fluctuation.

So if we select a restaurant wherein cost of two in between 1000 - 2000 that will provide us good food.



4. Restaurant serving some specific cuisines.

As earlier, here I have made one dictionary which is storing cuisines and ratings and the count of restaurants,_wherein cuisine works as the key and total_ratings and number of restaurant. First I have summed up all the ratings and_then I have divided by the total number of restaurants, which is helping me to get the average rating. Once I got the_average rating for the cuisines I have sorted them in descending order based on their ratings and after that I have_plotted them in bar graph. From bar graph we can see that those restaurants offering Persian, German, Mordern Indian _cusines get the good ratings. So if we good to a restaurants wherein these cuisines are being offered then there is likely to get good food.



QUESTION 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)] .

ANSWER : -

As we need to find the weighted ratings for each locality I have used one dictionary which will store the locality names and it will store all the values of all restaurants present in that locality. As formulation has been mentioned, I have applied that formula to get the weighted rating. Once that has been done,

I have plotted the graph and from that graph we can see these are the top 10 localites:

1 Hotel Clarks Amer, Malviya Nagar

2 Aminabad

3 Friends Colony

4 Powai

5 Kirlampudi Layout

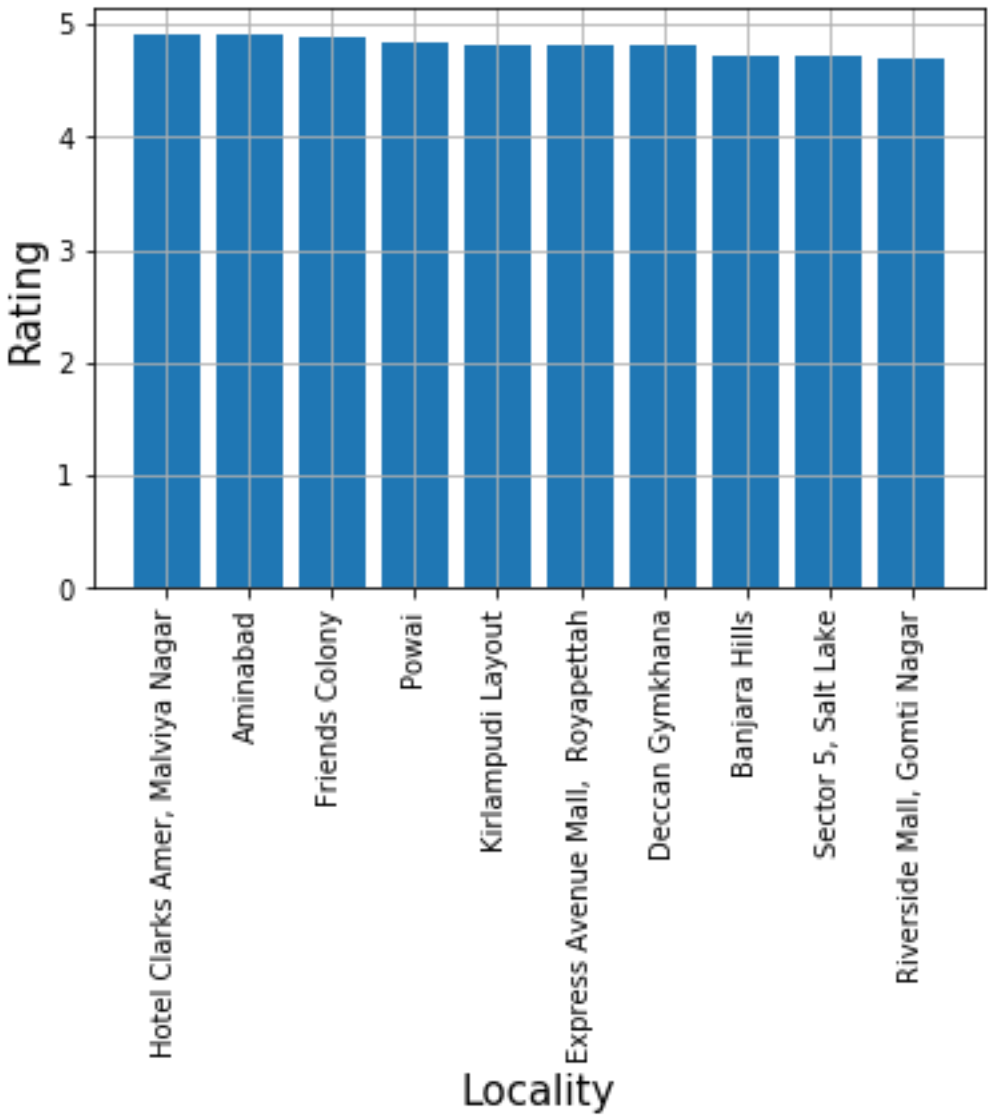
6 Express Avenue Mall, Royapettah

7 Deccan Gymkhana

8 Banjara Hills

9 Sector 5, Salt Lake

10 Riverside Mall, Gomti Nagar


Rating
5
4
3
2
1
0
Hotel Clarks Amer, Malviya Nagar
Aminabad
Friends Colony
Powai
Kirlampudi Layout
Express Avenue Mall, Royapettah
Deccan Gymkhana
Banjara Hills
Sector 5, Salt Lake
Riverside Mall, Gomti Nagar
Locality