VAQUAR SHAIKH

PROJECT REPORT

ZOMATO API

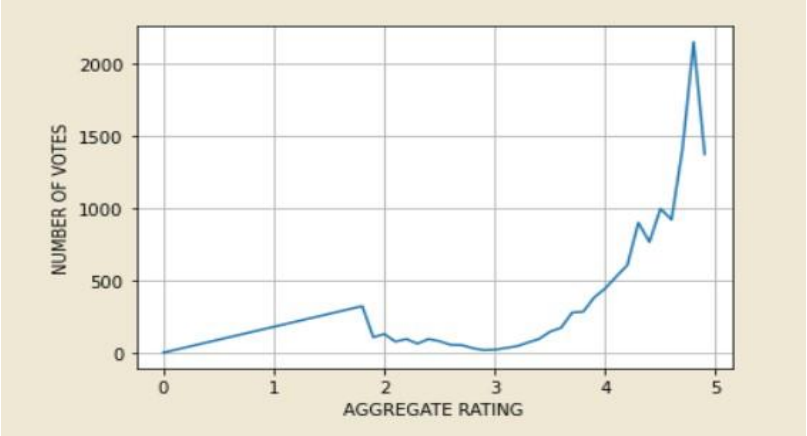
QUESTION 2 : User Rating of a restaurant plays a crucial role in selecting a restaurant or ordering the food from the restaurant.

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

2.1.1 Number of Votes given Restaurant

JUSTIFICATION :

I have used the concept of data compression to solve the given problem as the number of votes value can be large . So , hence to get the average rating I have divided the number of votes with the total number of restaurants . Maintained a dictionary in which the aggregate rating is mapped to number of votes and the restaurant count . I have made a separate dataframe which comprises of aggregate rating and number of votes . separated by "___" . Plotted the graph of user rating vs number of votes .



INFERENCE :

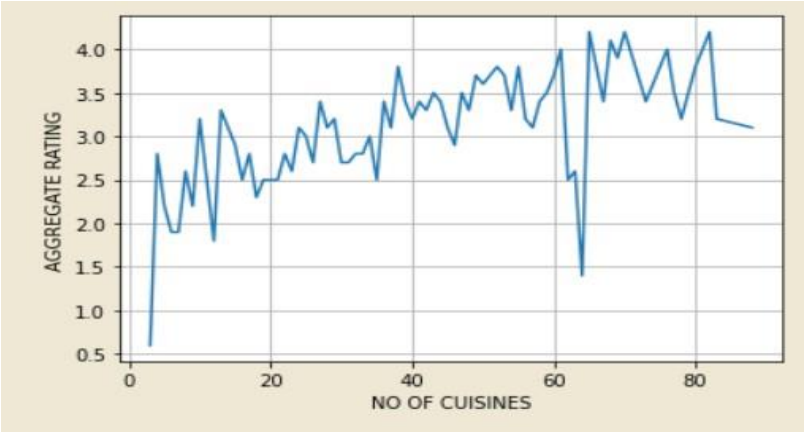
As we can observe , the ratings between 4.5 and 5 have the highest Number of votes . There is linear growth upto rating less than 2 .

Between 2 to 4.5 there is exponential growth in number of votes.

2.1.2 Restaurant serving more number of cuisines.

JUSTIFICATION :

As previously mentioned , again the concept of data compression been applied . To get the average values, I have used total_rating/No_of_restaurants. Maintained a dictionary in which the number of cuisines is mapped to the aggregate rating and number of restaurants .

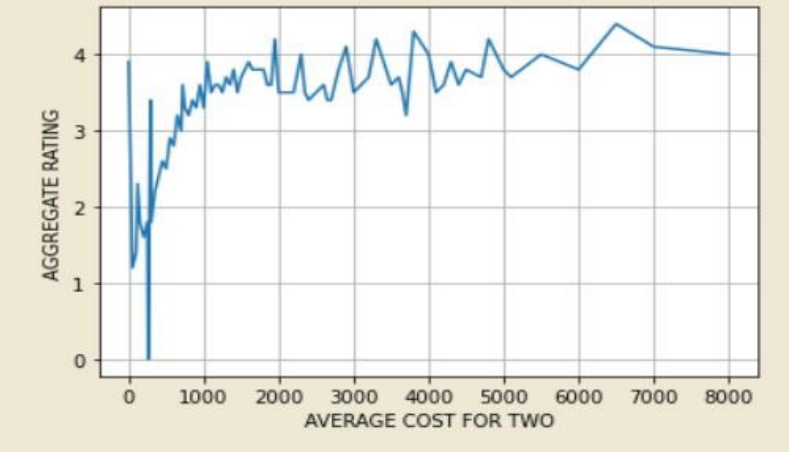


INFERENCE :
The higher the number of cuisines the more is the rating . In 60 to 80 the aggregate rating is the highest . but just above 60 there are plenty of restaurants for which the rating is terrible . Except this one exception , more the number of cuisines , more is the aggregate rating .

2.1.3 Average Cost of Restaurant

JUSTIFICATION :

Again as mentioned earlier , used the concept of data compression where in to get the average rating I have divided the aggregate rating with total number of votes to get the proper average rating . Fetched the 2 dataframes of aggregate rating and average cost for two in numpy array format . Have maintained a dictionary in which I have mapped the cost for two of specific restaurants with the total aggregate rating and number of restaurants serving the specific cuisine . Plotted the graph successfully .

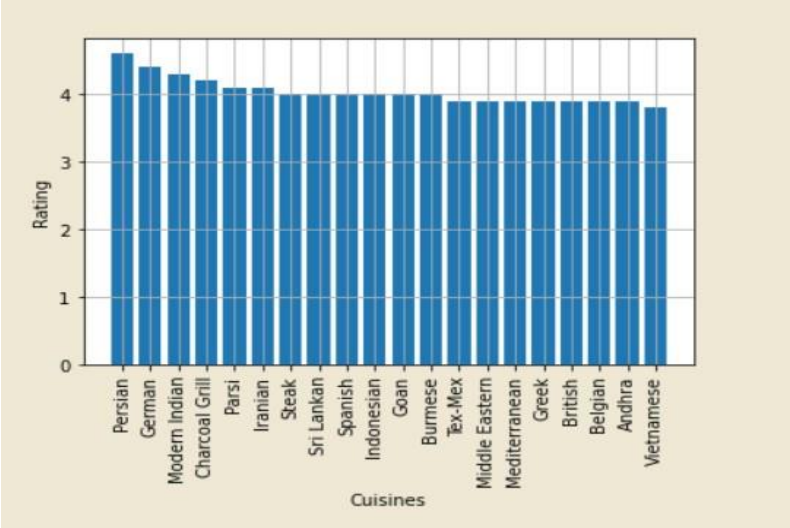


INFERENCE :
The restaurants having cost for 2 below 2000 have a rating below 4 . After 2000 , the rating becomes sort of stagnant upto 6000 . But the ratings , between 6000-7000 , the rating is highest .

2.1.4 Restaurant serving some specific cuisines.

JUSTIFICATION :

As mentioned earlier , I have calculated the average rating using data compression . where in I have divided total ratings with number of restaurants . Maintained a dictionary , in which I have mapped the specific cuisine name to aggregate rating and the number of restaurants serving the specific cuisine .



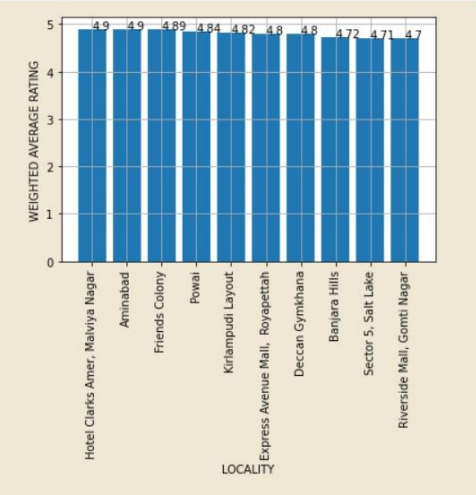
INFERENCE :

It is observed that the Persian cuisine is the top rated rated cuisine having the highest number of rating , whichever restaurant serves Persian cuisine , the rating is expected to be very good . the Vietnamese cuisine however, grabs the 20th place in the list of top 20 cuisines . I have plotted a graph for the top twenty cuisines .

2.2.1 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) .

JUSTIFICATION :

Again as in the previous modules , I have maintained a dictionary but in this case I have mapped the localities with the product of number of votes and aggregate rating as first value and number of votes as the second value . finally I divided the summation of product of number of votes and aggregate rating by the summation of total number of votes. I was maintaining the sum in dictionary likewise for the respective locality .



INFERENCE :
The top 10 localities are :
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