

Zomato API Project

Question 1

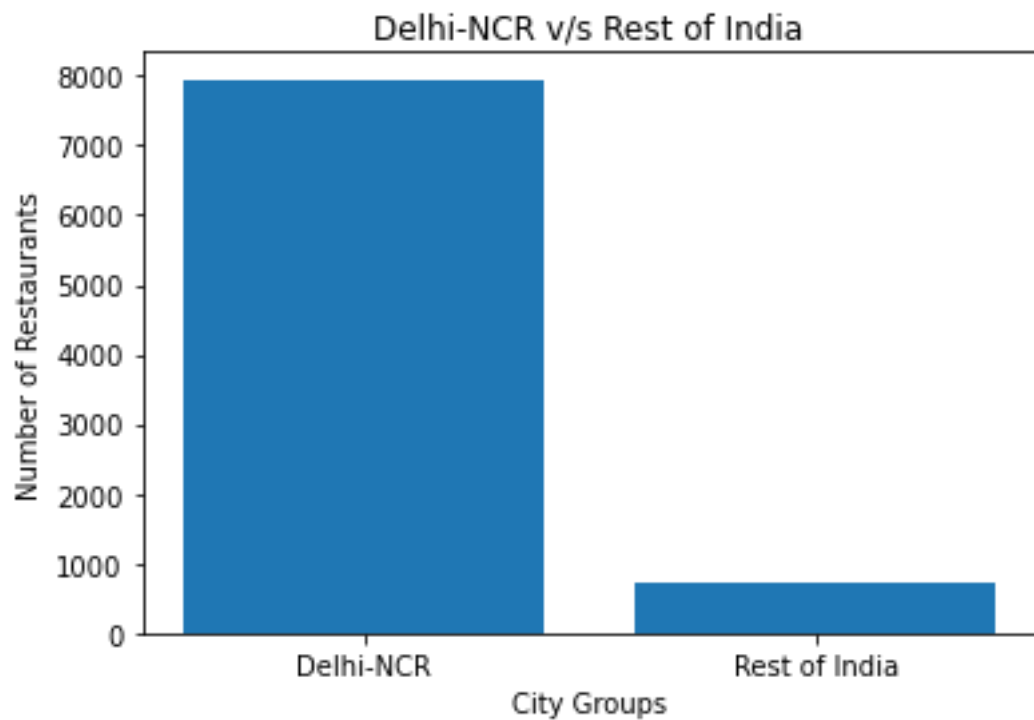
1. The dataset is highly skewed toward the cities included in Delhi-NCR. So, we will summarise all the other cities in Rest of India while those in New Delhi, Ghaziabad, Noida, Gurgaon, Faridabad to Delhi-NCR. Doing this would make our analysis turn toward Delhi-NCR v Rest of India.

1. Plot the bar graph of number of restaurants present in Delhi NCR vs Rest of India.

Answer:

Cities in Delhi NCR: 7947

Cities in Rest of India: 705



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

Answer:

German : Absent in the Delhi - NCR Region

Malwani : Error in dataset given

BBQ : Error in dataset given

Cajun : Absent in the Delhi - NCR Region

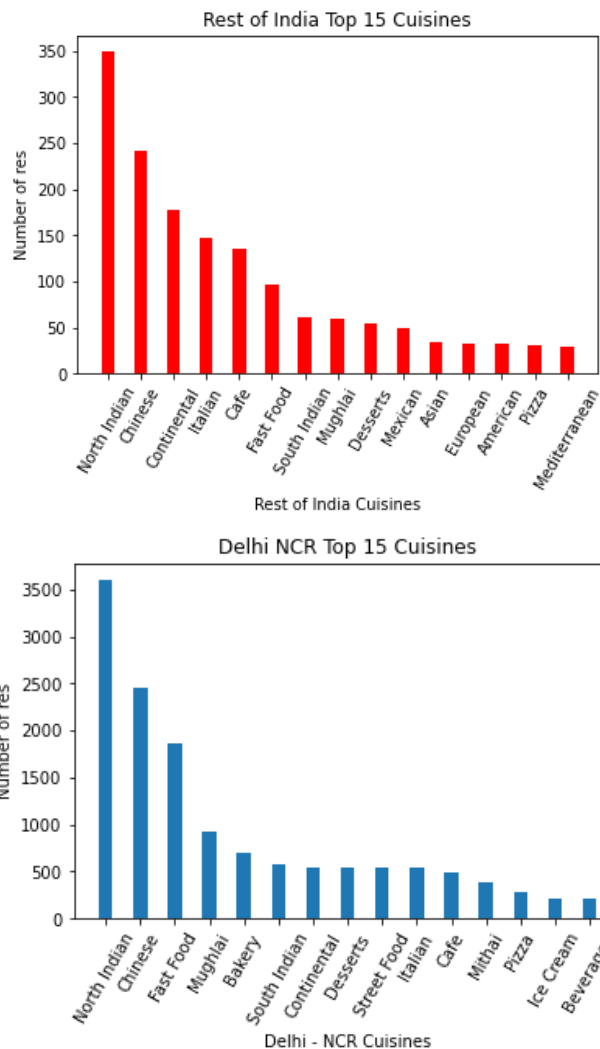
3. Find the top 10 cuisines served by maximum number of restaurants in Delhi NCR and rest of India.

Answer:

1 . Cuisine name: North Indian	Number of restuarants: 3946
2 . Cuisine name: Chinese	Number of restuarants: 2690
3 . Cuisine name: Fast Food	Number of restuarants: 1963
4 . Cuisine name: Mughlai	Number of restuarants: 992
5 . Cuisine name: Bakery	Number of restuarants: 726
6 . Cuisine name: Continental	Number of restuarants: 724
7 . Cuisine name: Italian	Number of restuarants: 682
8 . Cuisine name: South Indian	Number of restuarants: 631
9 . Cuisine name: Cafe	Number of restuarants: 627
10 . Cuisine name: Desserts	Number of restuarants: 597

4. Write a short detailed analysis of how cuisine served is different from Delhi NCR to Rest of India. Plot the suitable graph to explain your inference

Answer:



Ignoring the fact that data is majorly skewed towards Delhi NCR region

We can see that North Indian Cuisine in Delhi - NCR region is a major hit and almost every restaurant has North Indian

The count decreases as Chinese and intercontinental is preferred in rest of India whereas Chinese and Fast Food is common in Delhi - NCR

In Delhi - NCR region, bakery is a cuisine enjoyed more as compared to ROI

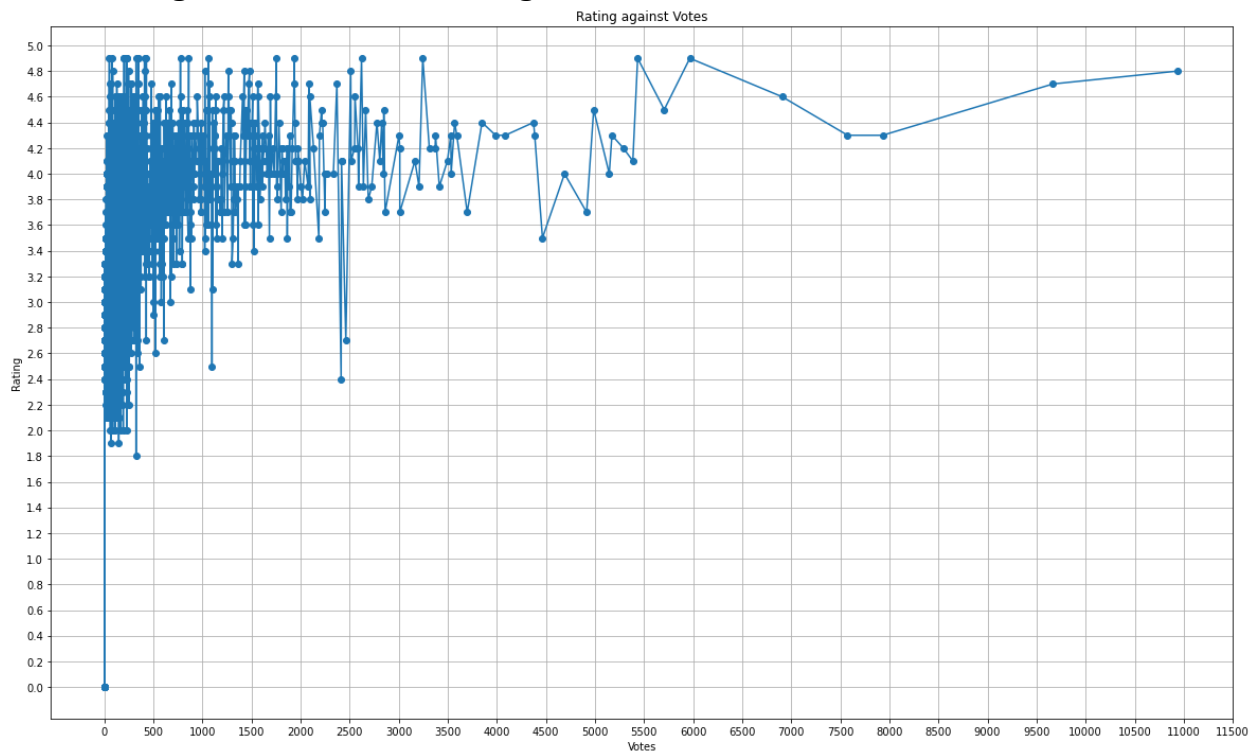
Mughlai, Mexican and Asian Cuisine is preferred more since more restaurants are serving these as compared to ROI

Question 2

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

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.
 - A. Number of Votes given Restaurant
 - B. Restaurant serving more number of cuisines.
 - C. Average Cost of Restaurant
 - D. Restaurant serving some specific cuisines.
2. Find the weighted restaurant rating of each locality and find out the top 10 localities with more weighted restaurant rating? Weighted Restaurant Rating = $\frac{\sum (\text{number of votes} * \text{rating})}{\sum (\text{number of votes})}$.

2.1.1 Rating v/s number of votes given

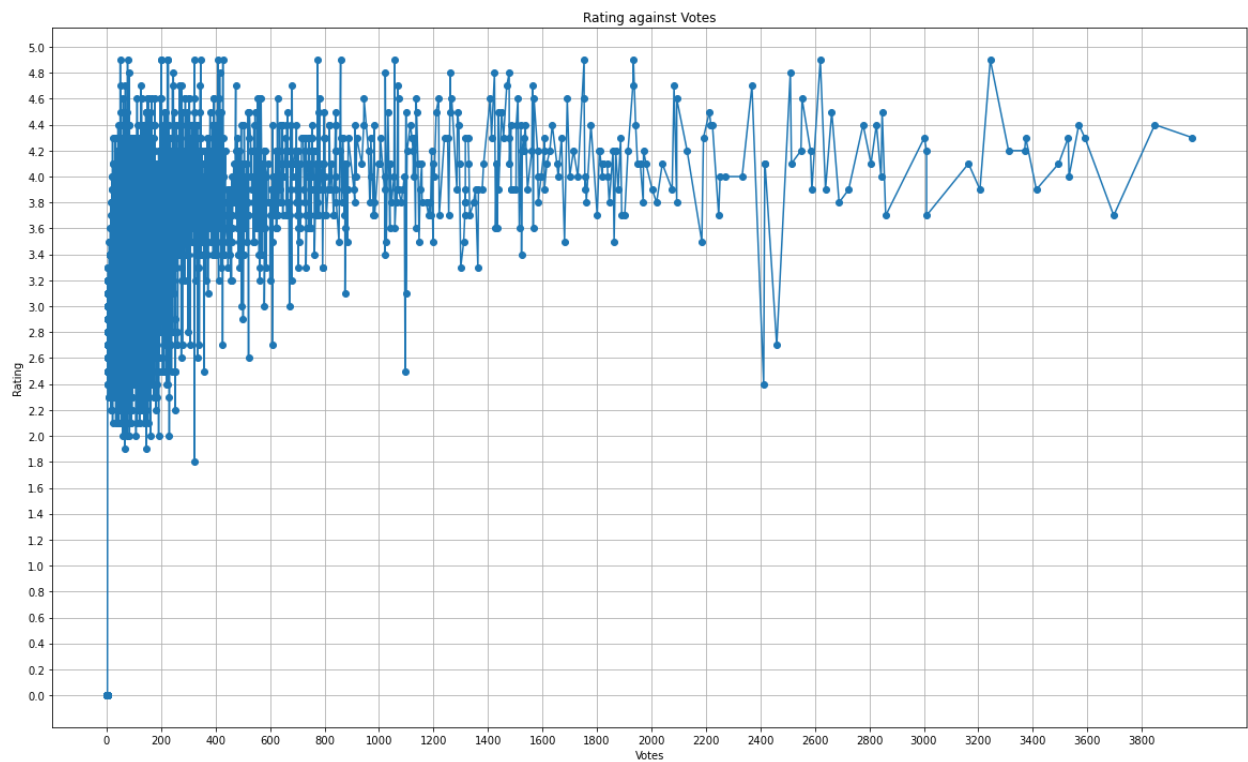


As We can See, restaurants having more than 4000 votes tend to have a rating above 3.4 - 3.6

But restuarants below 4000 votes tend to have their rating varied ranging from 2.2 to even 5
Thus Votes do not affect directly the rating but having more votes means a steady quality of service

Whereas having less votes implies having a rough service or mid-range satisfaction.

On Further analysis, in votes below 4000, votes below 800 are majorly disrupted amongst the 2-3 rating range
Restuarants must focus on getting their vote count up



2.1.2 Rating v/s multiple cuisine restaurant

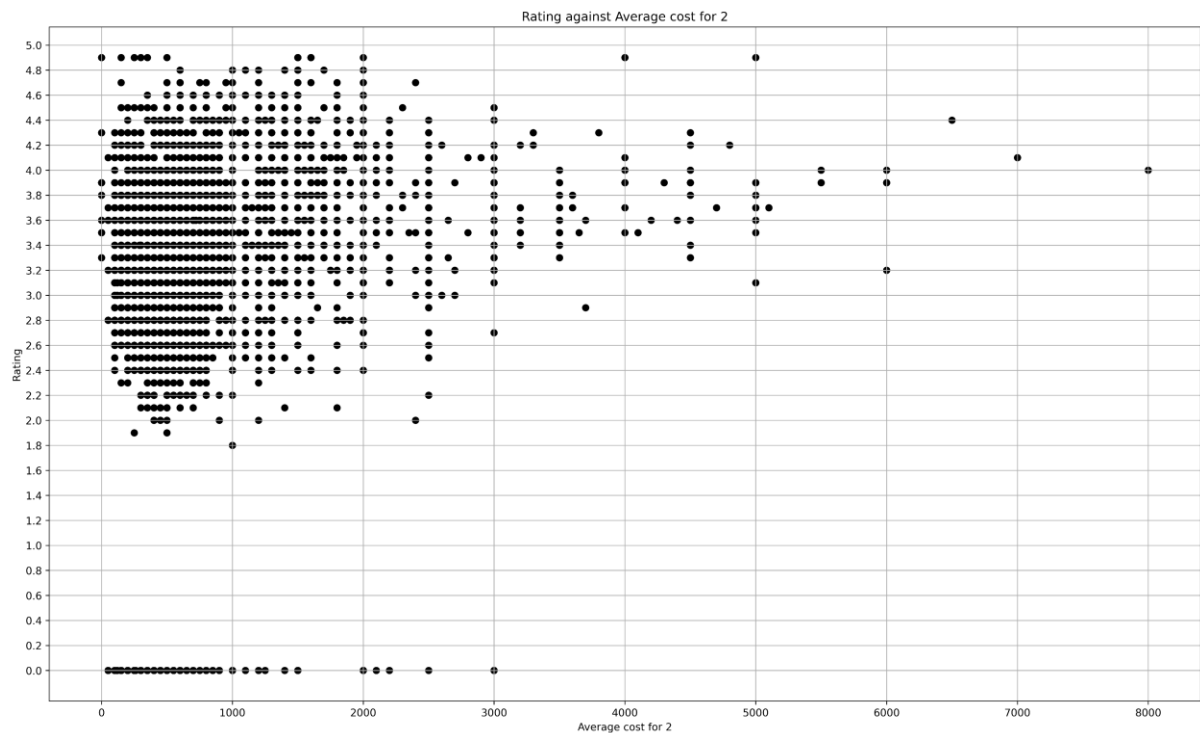


As we can see, the aggregate factor is selected as mean of ratings

As the number of cuisines increases, the rating also increases but starts to decrease when # of cuisines is 8.

It can be inferred that 7 Cuisine options hits the sweet spot of achieving ratings

2.1.3 Rating vs Avg cost of restaurant



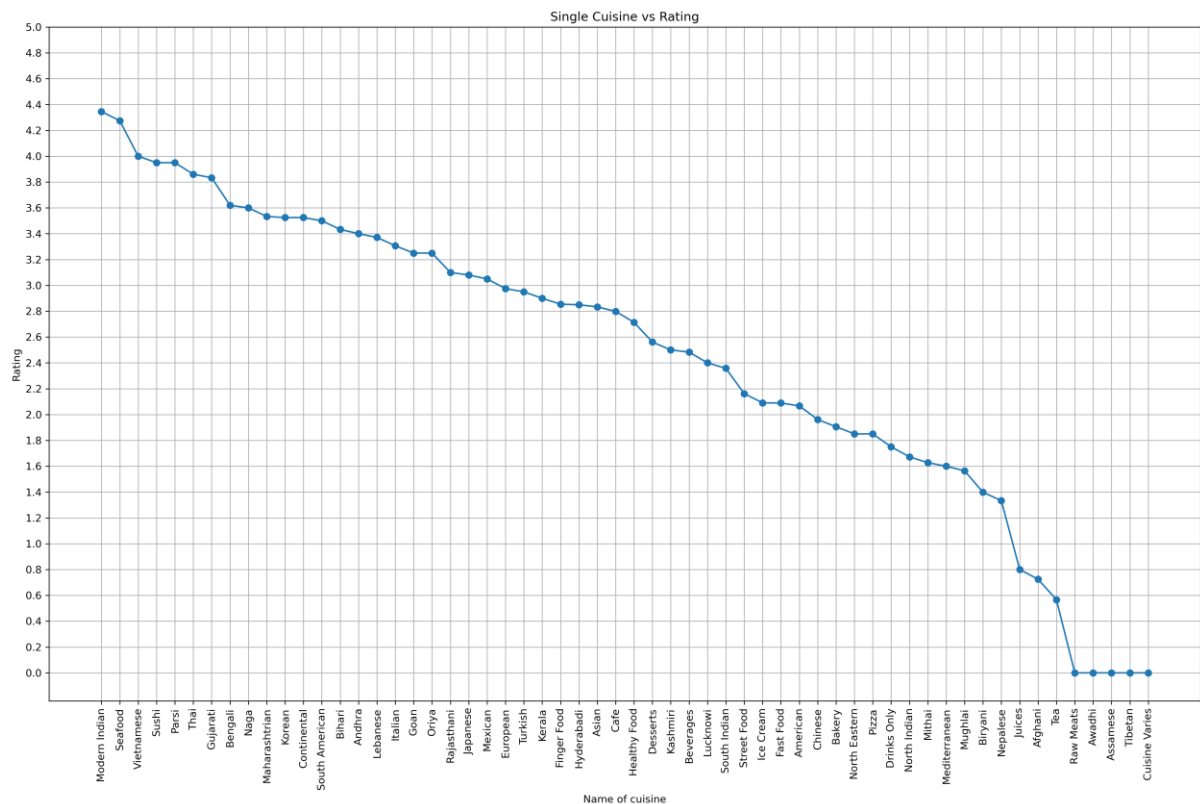
As we can see from plot, its clearly visible that maximum rating is achieved when cost for two is between 0-2000

above 2000, very few Ratings have been given and that also in a varied manner from 2-5

Restaurants having cost for 2 between 0-1000 are however uniformly distributed between rating 2 and 5

This infers that along with cost for 2, Quality of service is uniformly varying

2.1.4 Restaurant serving some specific cuisines.



Conclusion: Cuisines such as Modern Indian, Seafood, vietnamese, etc recieved on an average higher ratings than

restaurants serving just Juices, Biryani, Pizza, etc

As there is a steady decline between the cuisines, the mindset of ratings decreases as we serve just single cuisine food

2.2 Find the weighted restaurant rating of each locality and find out the top 10 localities with more weighted restaurant rating?

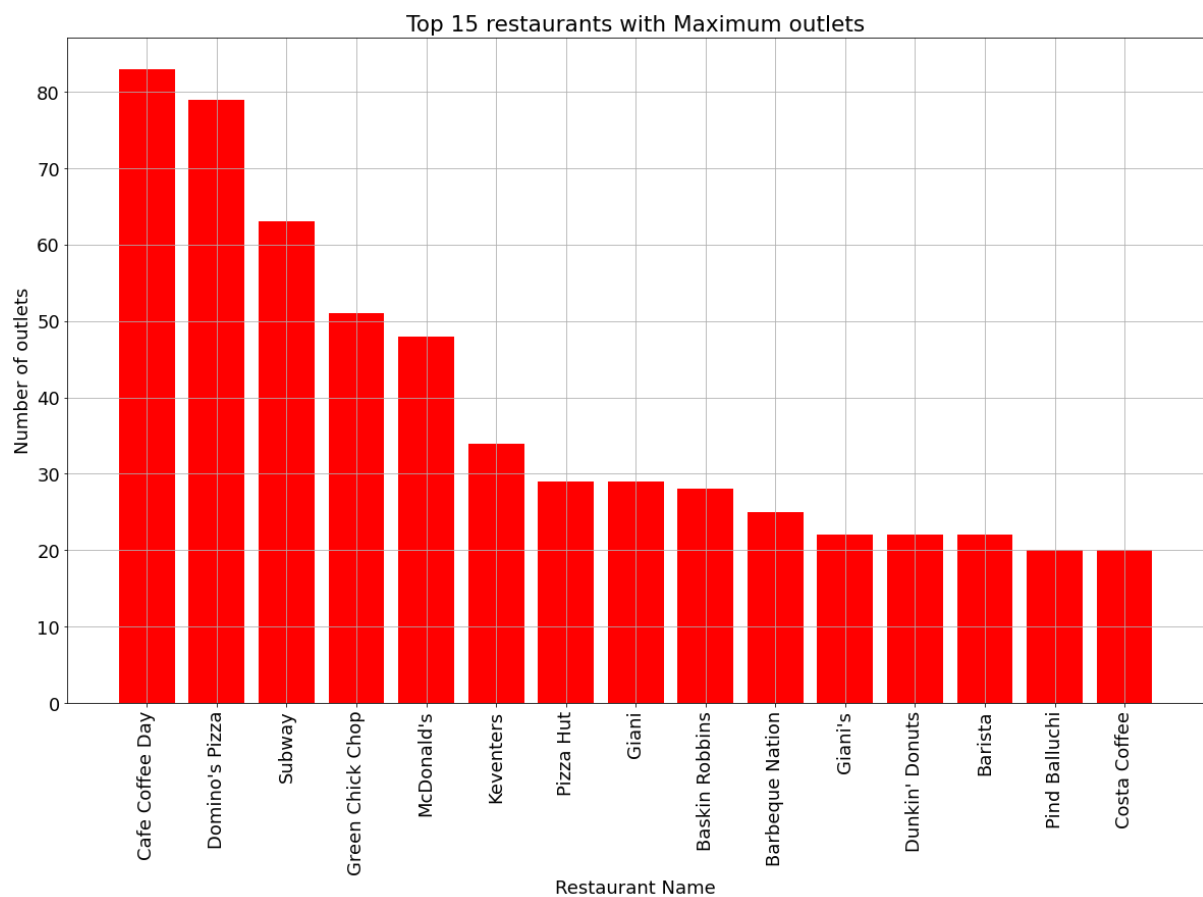
Hotel Clarks Amer, Malviya Nagar	4.900
Aminabad	4.900
Friends Colony	4.887
Powai	4.842
Kirlampudi Layout	4.820
Deccan Gymkhana	4.800
Express Avenue Mall, Royapettah	4.800
Banjara Hills	4.719
Sector 5, Salt Lake	4.707
Riverside Mall, Gomti Nagar	4.700

Question 3

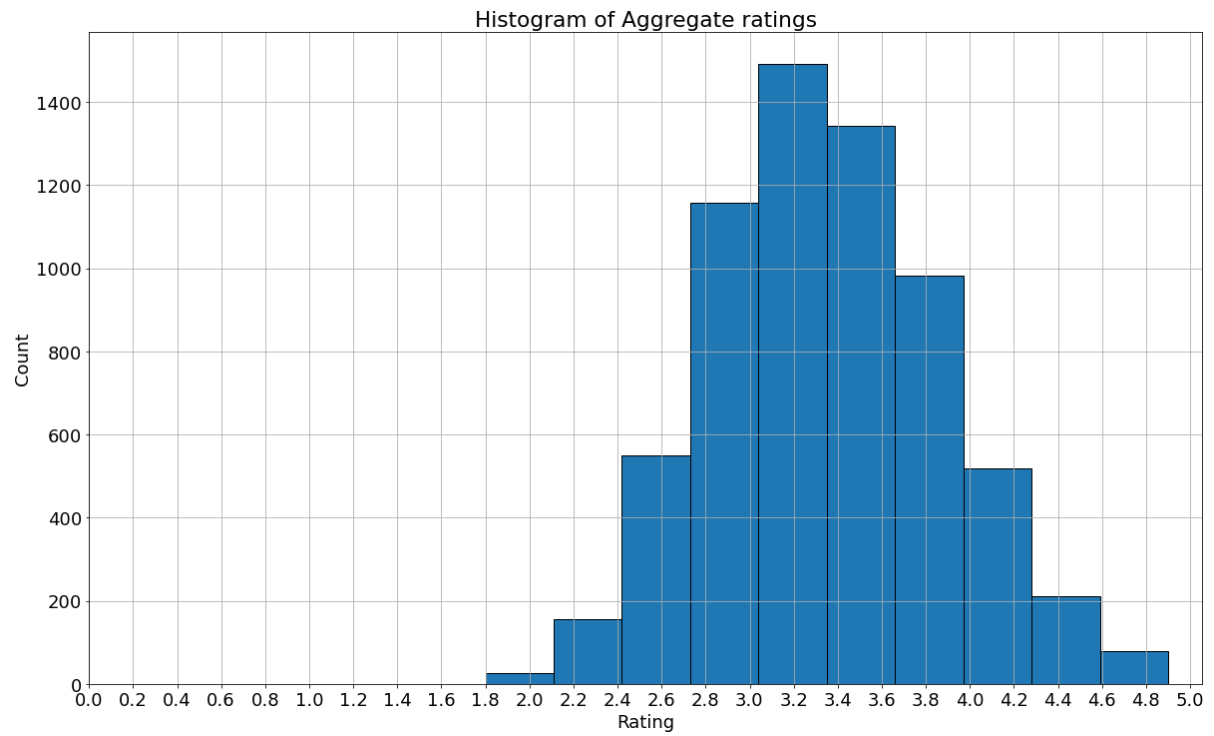
Visualization

- Plot the bar graph top 15 restaurants have a maximum number of outlets.
- Plot the histogram of aggregate rating of restaurant(drop the unrated restaurant).
- Plot the bar graph top 10 restaurants in the data with the highest number of votes.
- Plot the pie graph of top 10 cuisines present in restaurants in the USA.
- 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.

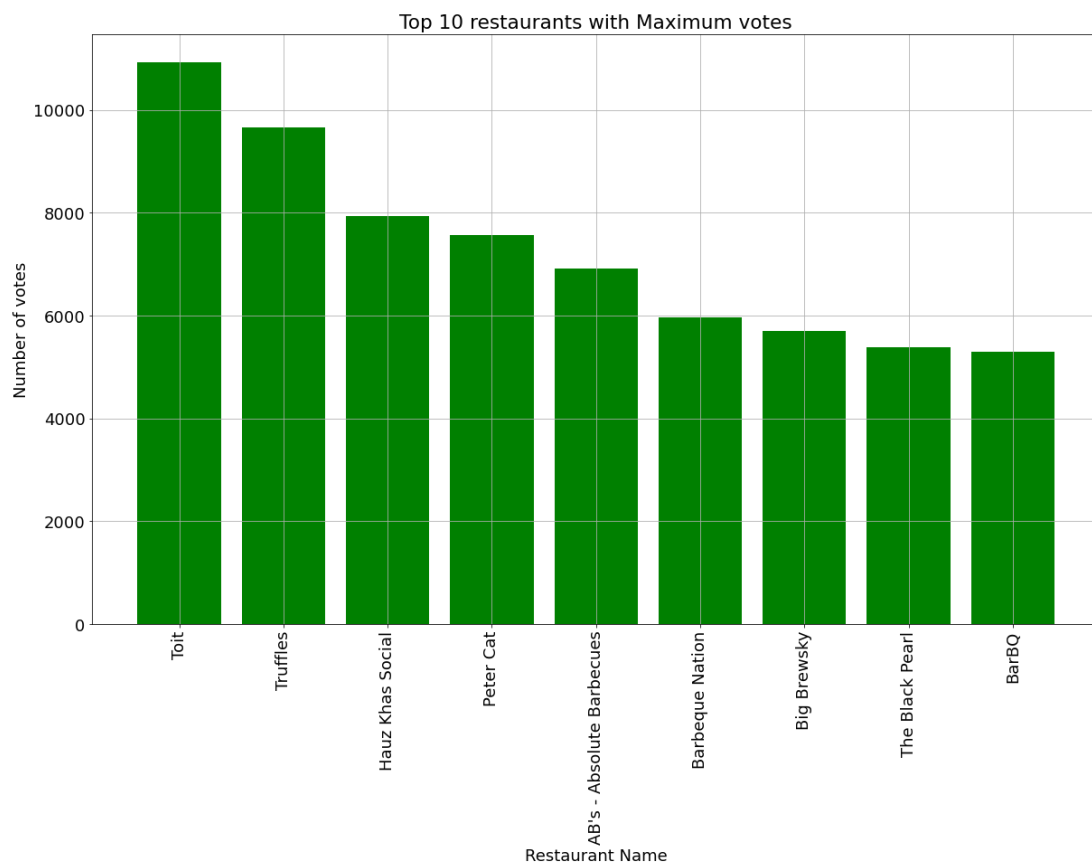
3.1



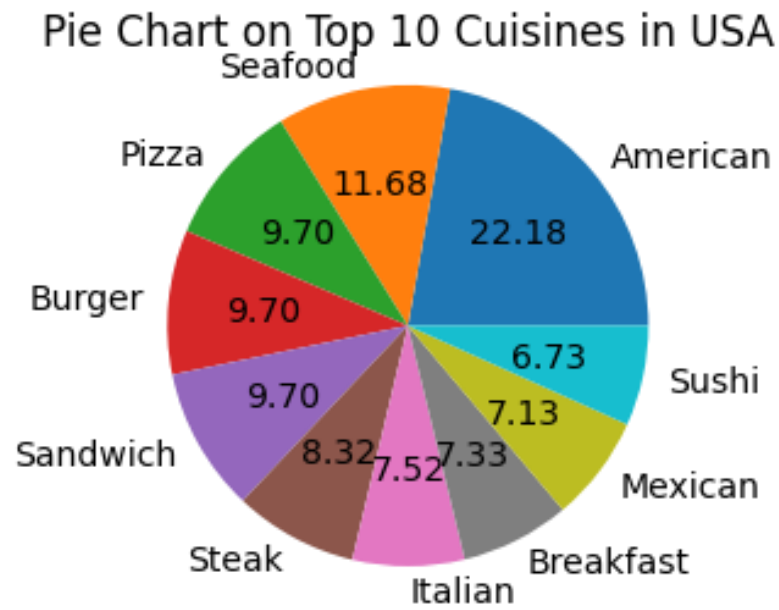
3.2



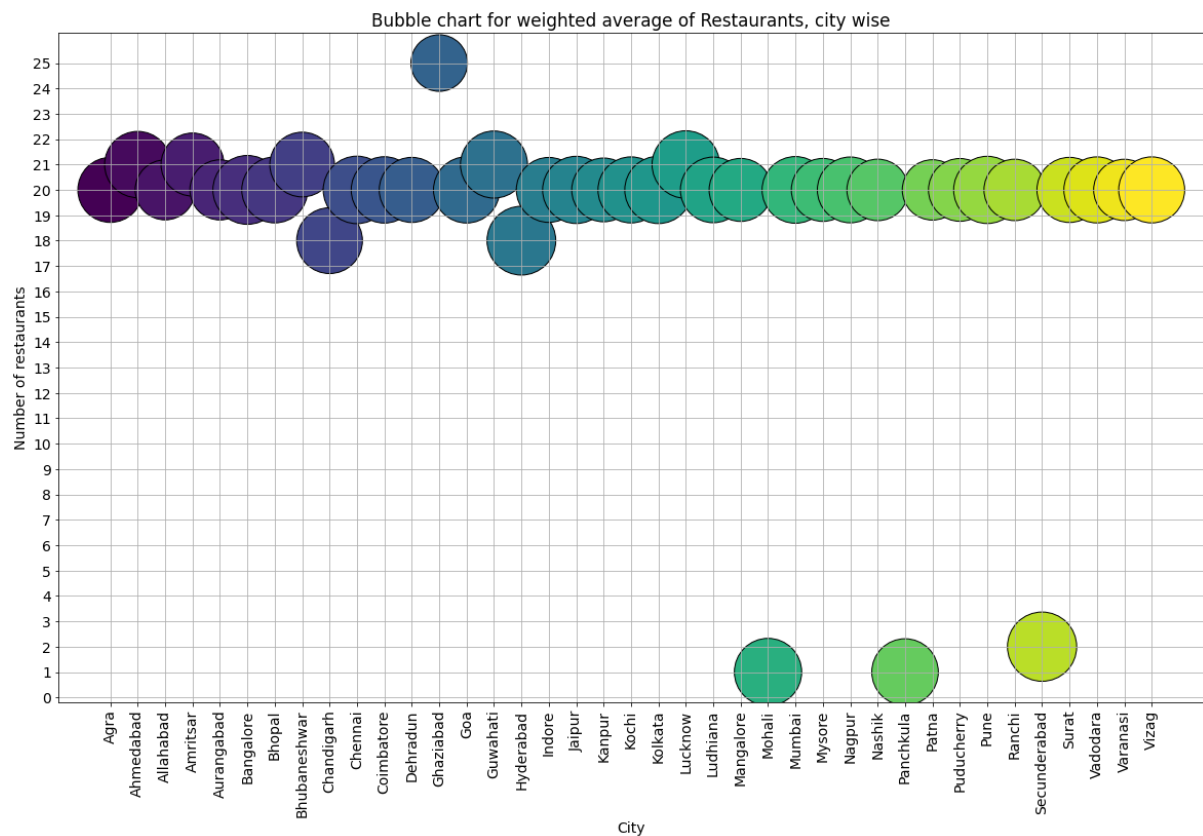
3.3

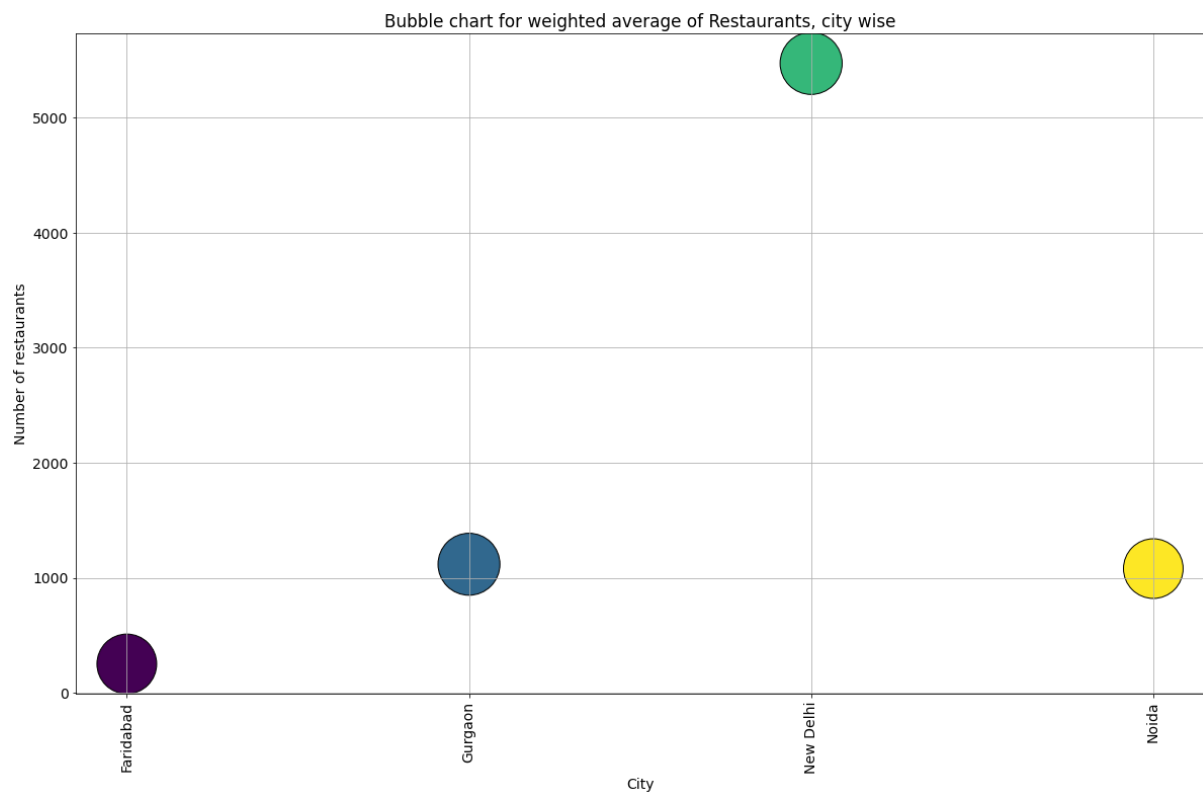


3.4



3.5





NOTE: ALL Explanation and Justification given in .ipynb File