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.

    Delhi NCR 7947
    Rest of India 705
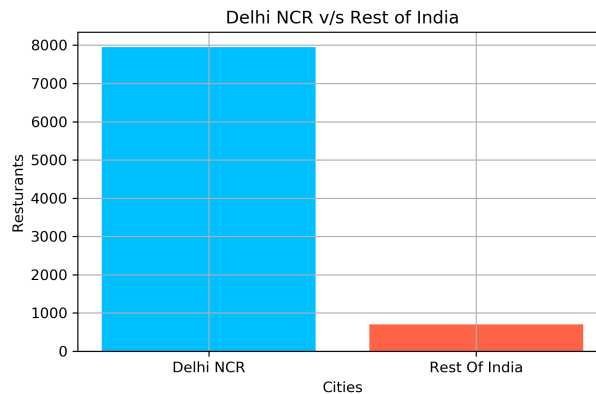
    2. Find the cuisines which are not present in restaurant of Delhi NCR but present in rest of India. Check using Zomato API whether this cuisines are actually not served in restaurants of Delhi-NCR or just it due to incomplete dataset.

    The cuisines not present in Delhi NCR, but present in rest of India are

Cuisine	Present in Delhi-NCR(API)
Malwani	Yes
German	No
BBQ	Yes
Cajun	No

    If we use the Zomato API, we can see that German and Cajun cuisines are not present in Delhi, But Malwani and BBQ are present, and the dataset is incomplete

    3. Find the top 10 cuisines served by maximum number of restaurants in Delhi NCR and rest of India.
   Top 10 cuisines served by Delhi-NCR are as follows:
    • North Indian
    • Chinese
    • Fast Food
    • Mughlai
    • Bakery
    • South Indian
    • Continental

- Desserts
- Street Food
- Italian

Top 10 cuisines served in Rest of India are as follows:
- North Indian
- Chinese
- Continental
- Italian
- Cafe
- Fast Food
- South Indian
- Mughlai
- Desserts
- Mexican

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.

Top cuisines in Delhi NCR


Top cuisines in Rest of India
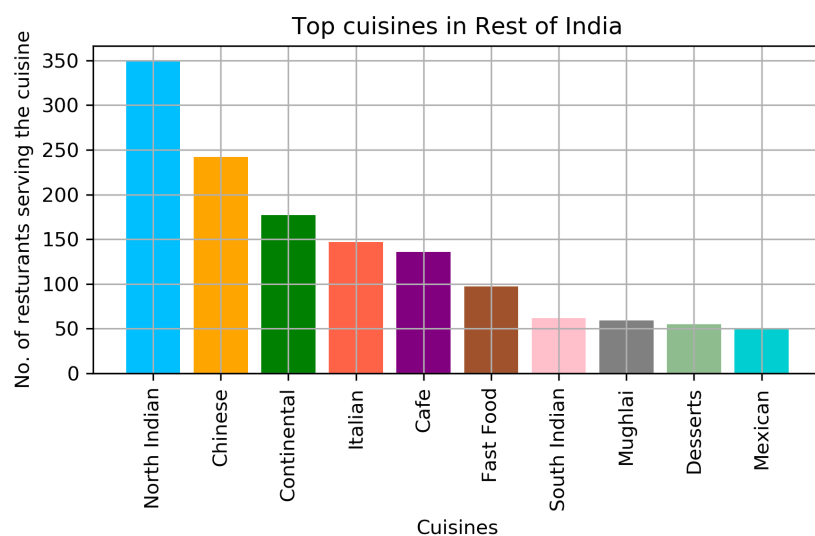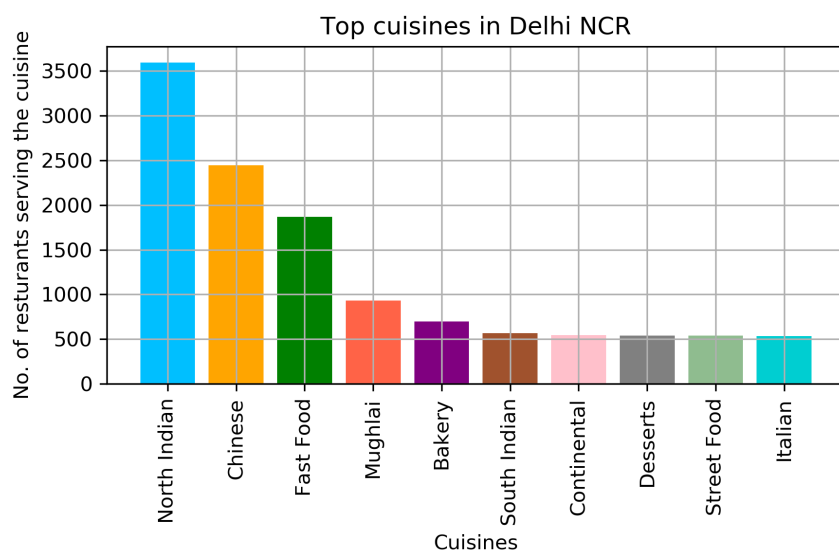
From the data and the graph we can infer that North Indian and Chinese are two of the most popular cuisines in Delhi-NCR and Rest of India. Fast Food, Mughlai, South Indian, Continental, Desserts and Italian are also popular in Delhi NCR and Rest of India, though they do not share the same level of popularity, Like, Fast Food is really popular in Delhi-NCR, but not that popular in Rest of India. Mexican food is not that popular in Delhi-NCR, But it is popular in Rest of India. Bakery is popular in Delhi-NCR, But it is not that popular in Rest of India.

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.)
   1. Number of Votes given Restaurant

Graph between No. of reviews and Rating
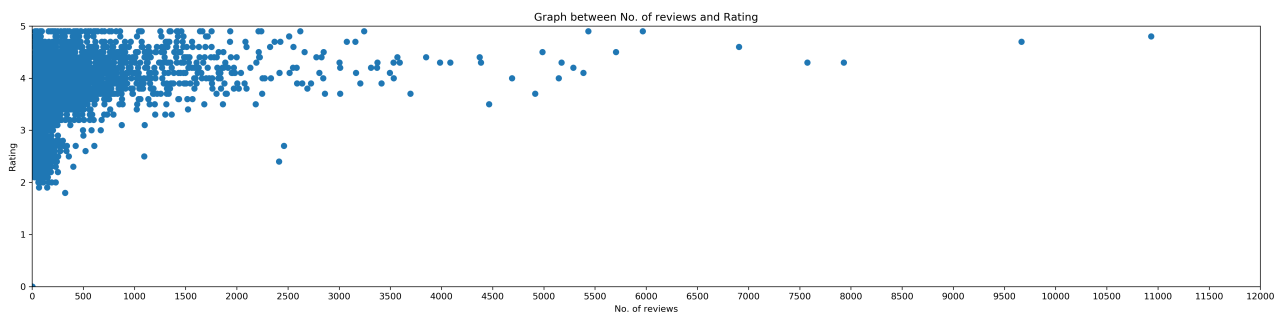
      If we plot a graph between the No of votes and the Rating, we can see that below 500 reviews, there is no real correlation between the No of reviews and the rating. After that we can see a common trend that higher the no of reviews of a restaurant, higher is the rating of that restaurant, This makes sense because if a lot of people are eating at a restaurant, and rating it, the restaurant is good.

      2. Restaurant serving more number of cuisines

         There are at maximum 8 cuisines and at minimum 1 cuisine served at a restaurant,   If we plot a graph between the number of cuisines served and the "Average rating", we can see that the highest rated restaurants server 6 cuisines with an average rating of 3.65143, closely followed by restaurants serving 7 cuisines with an average rating of 3.64615, and then with restaurant serving 5 cuisines with an average rating of 3.48129. Restaurants serving a single cuisine are the worst rated with an average rating of 2.05509


Graph between No. of cuisines and Rating
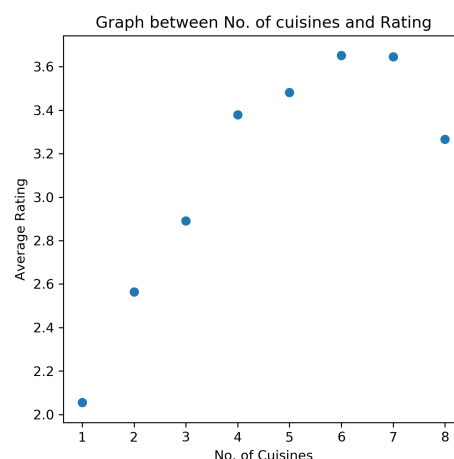
3. Average Cost of Restaurant
Average cost for two can play in important role in the rating of a restaurant, If we plot the average rating for two, and the rating of a restaurant, we can see that, the more expensive the restaurant, the higher it is rated. Restaurants where average cost for two is below 750 are rated pretty poorly, and the restaurants where average cost for two is 1000 have a good rating, This can also be due to the fact that there are pretty less reviews for restaurants below

Graph between Average Cost for two and Rating
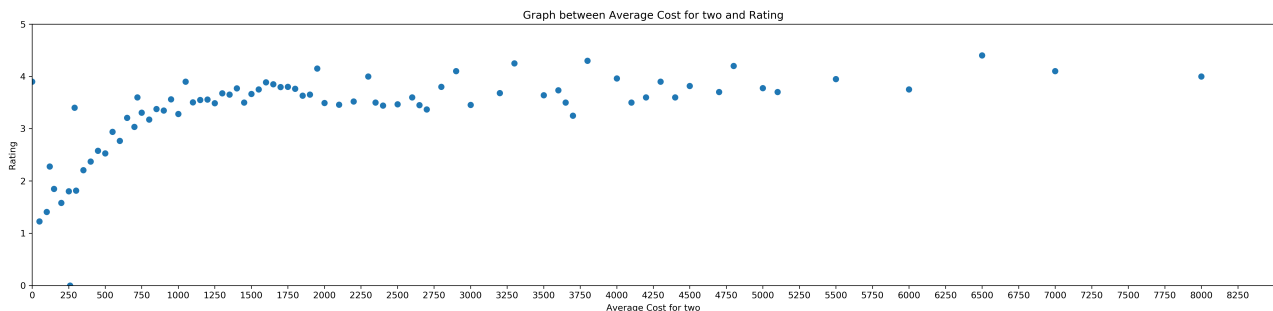
4. Restaurant serving some specific cuisines
We can plot a graph on the different cuisines and the average rating for each cuisine, this will help us to determine which cuisine is usually highly rated

Graph between Cuisine and Rating
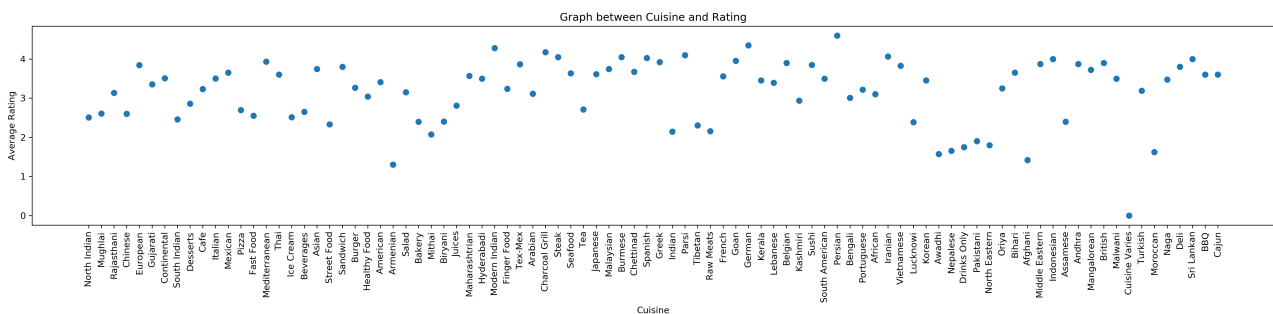
Persian food is really highly rated

2. Find the weighted restaurant rating of each locality and find out the top 10 localities with more weighted restaurant rating?
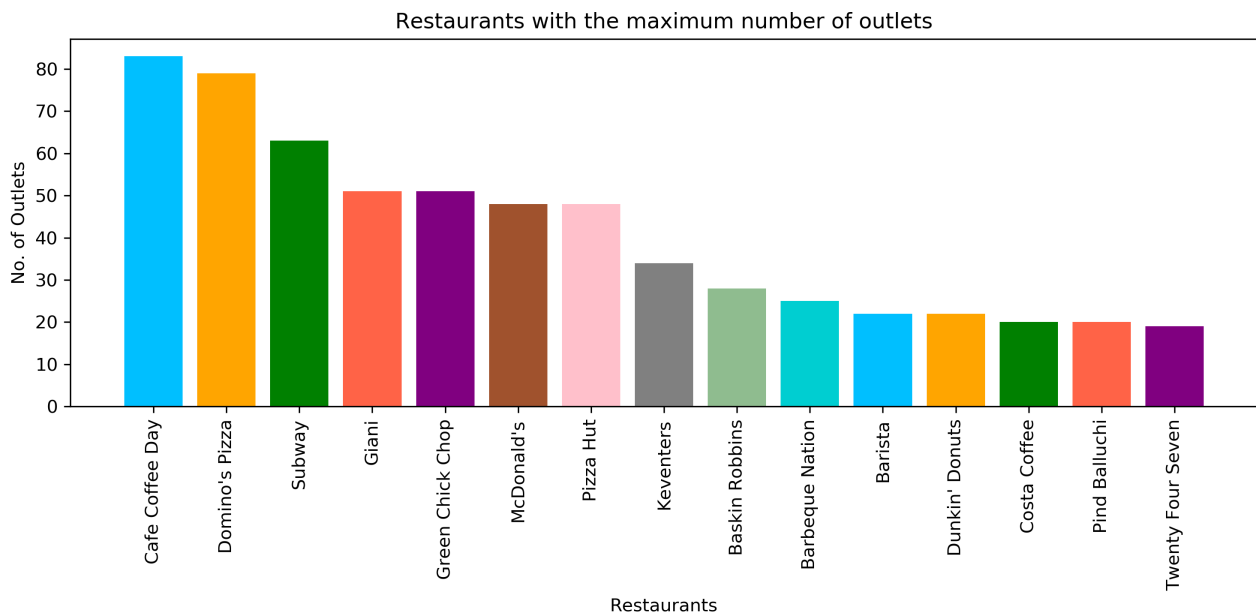   1. Weighted Restaurant Rating=Σ (number of votes * rating) / Σ (number of votes).
      Top 10 localities are as follows :

| Locality	Rating
Hotel Clarks Amer, Malviya Nagar	4.90
Aminabad	4.90
Friends Colony	4.89
Powai	4.84
Kirlampudi Layout	4.82
Deccan Gymkhana	4.80
Express Avenue Mall, Royapettah	4.80
Banjara Hills	4.72
Sector 5, Salt Lake	4.71
Riverside Mall, Gomti Nagar	4.70

3. **Visualization**
   1. Plot the bar graph top 15 restaurants have a maximum number of outlets.
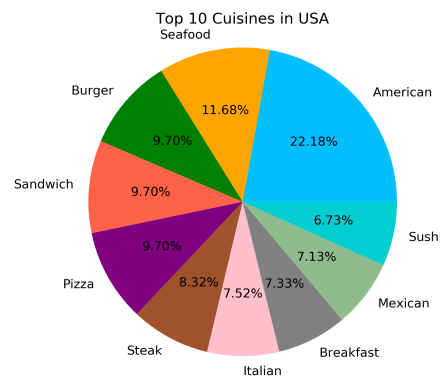

   2. Plot the histogram of aggregate rating of restaurant(drop the unrated restaurant).
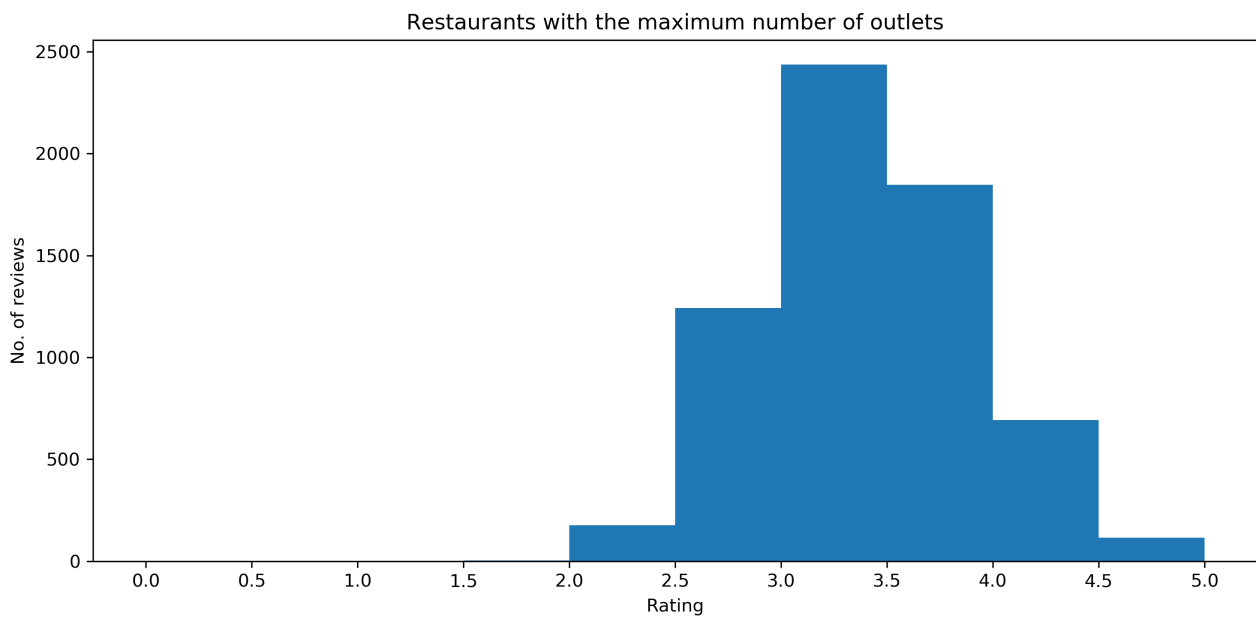
   3. Plot the bar graph top 10 restaurants in the data with the highest number of votes.

Restaurants with the maximum number of votes
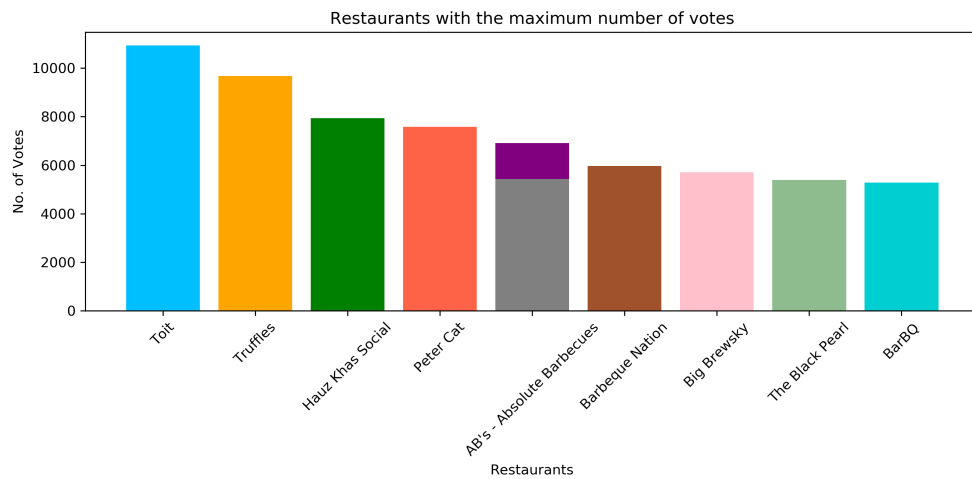
4. Plot the pie graph of top 10 cuisines present in restaurants in the USA.

Top 10 Cuisines in USA

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.

Bubble Chart of Restaurants and the weighted restaurant rating