Restaurants of Delhi

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1.Introduction

1.1background

New Delhi is the capital city of India. It is a part of the city of Delhi's 11 districts. The city itself has a population of 257,803. However, the much larger metro area has a population that exceeds 26 million.,

New Delhi are used interchangeably to refer to the National Capital Territory of Delhi (NCT), these are two distinct entities, with New Delhi forming a small part of Delhi. The National Capital Region is a much larger

entity comprising the entire NCT along with adjoining districts in neighboring states.

The official language of New Delhi and the one that is most widely spoken is Hindi. However, English is also spoken as a formal language within businesses and government agencies. Over last decades it is continuously grow because of the city's important role in government and commercial business.

With it's diverse culture , comes diverse food items. There are many restaurants in New Delhi City, each belonging to different categories like Chinese , Italian , French etc.

So as part of this project , we will list and visualize all major parts of New Delhi City .

1.2 Problem

We have to visualize all the locality in Delhi and find out which is best chinese cuisine restaurants in delhi and which locality consist of most no of restaurants and in between solving the problem we will get to know about solution of some extra problems

2.Data acqusition and cleaning

2.1 Data source

I have acquire the data from **kaggle** dataset . This dataset was uploaded by a analyst of zomato .We can access it through Zomato kaggel dataset :

https://www.kaggle.com/shrutimehta/zomato-restaurants-data

2.2 Data cleaning

After downloading the dataset and converting it into a pandas dataframe I have decided to remove unwanted and fill or remove missing values. First I have extract the data of india(country code=1) and then from that data I have extracted the data of Delhi.Then I have decided to remove all the restaurants whose latitude and longitude values are missing because without the lat and long it is unable to explore or visualize that restaurants on map.I have also remove that restaurants whose aggregate rating is not given because without that I can't rank the restaurants.

2.3 Feature selection

After cleaning the data , there are 21 features available among them many of

them are redundant like currency ,is online delivery available or not and many more.

So I have selected only useful features like aggregate rating,locality etc.I haven't choose some features because:

Currency – it is same for all restaurants

Is online delivery available - I don't think this will have any impact while visualizing dataset

Rating colour – is completely a redundant feature

Likewise I have remove unwanted features.

3.Exploratory Data Analysis

3.1 There are many thing which we cannot get by just seeing the features of data so we have to explore it using graphs

3.2 Which places have best restaurants in delhi?

I have found best restaurants by comparing mean rating of restaurants of a locality and visualize it using bar graph

The highest rated resturant in top 10 locality of New Delhi
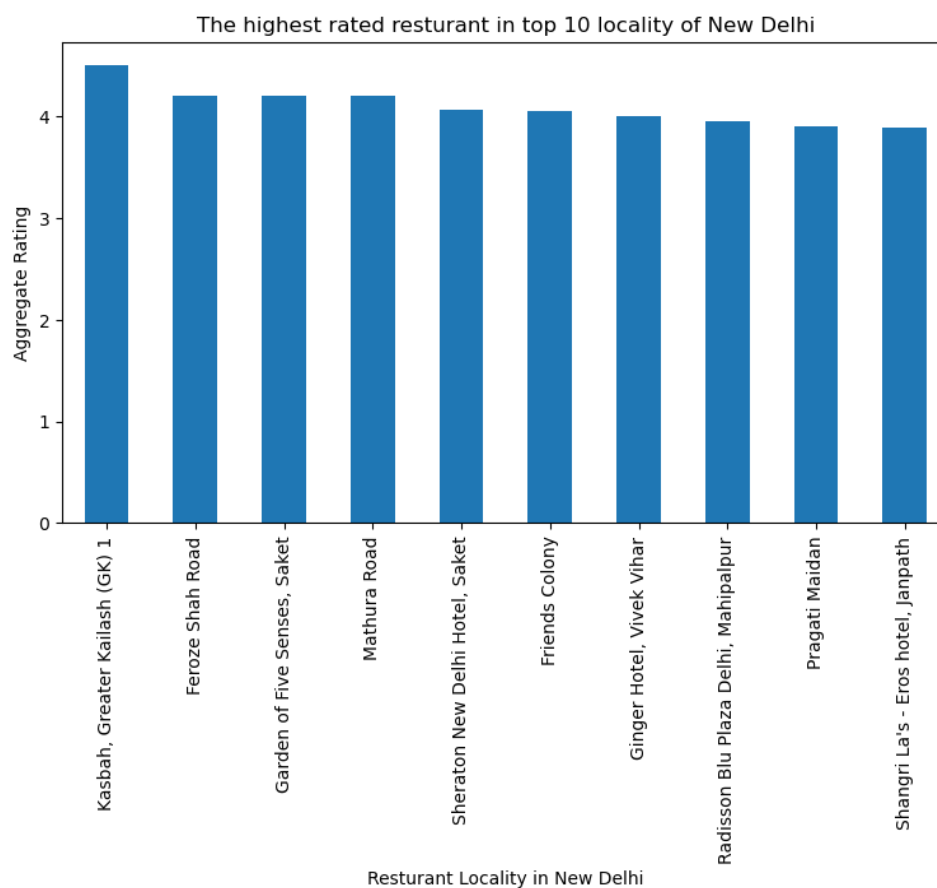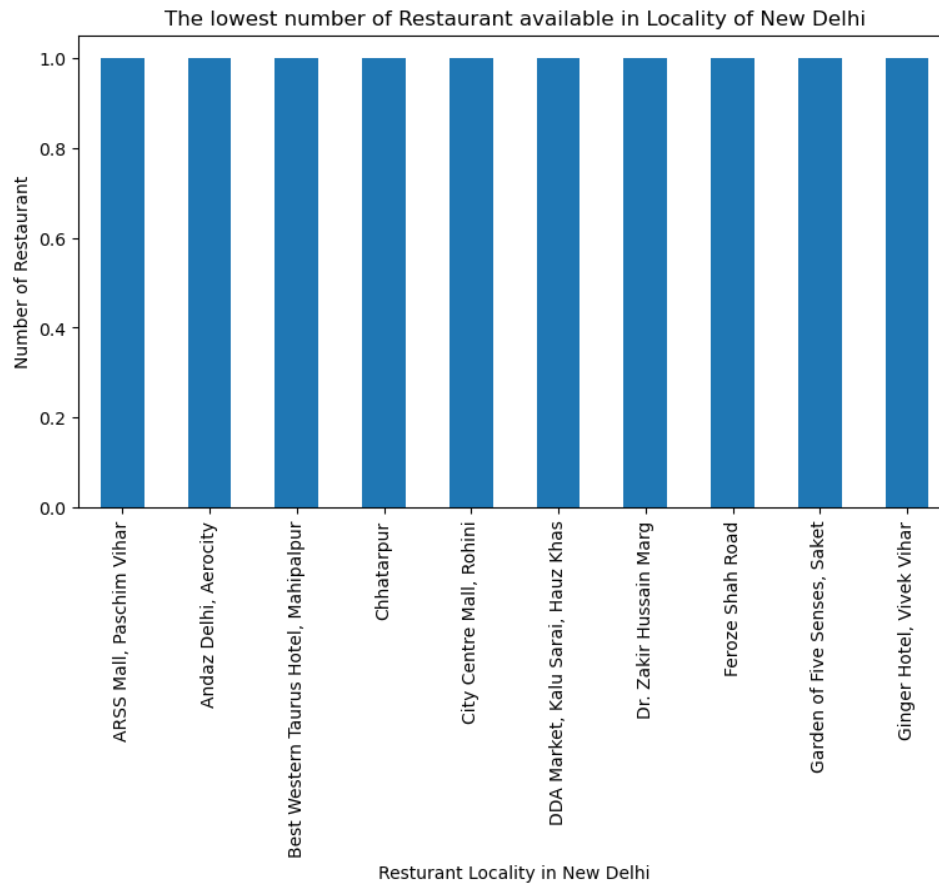
3.3 Which locality have worst restaurants?

worst resturants of delhi
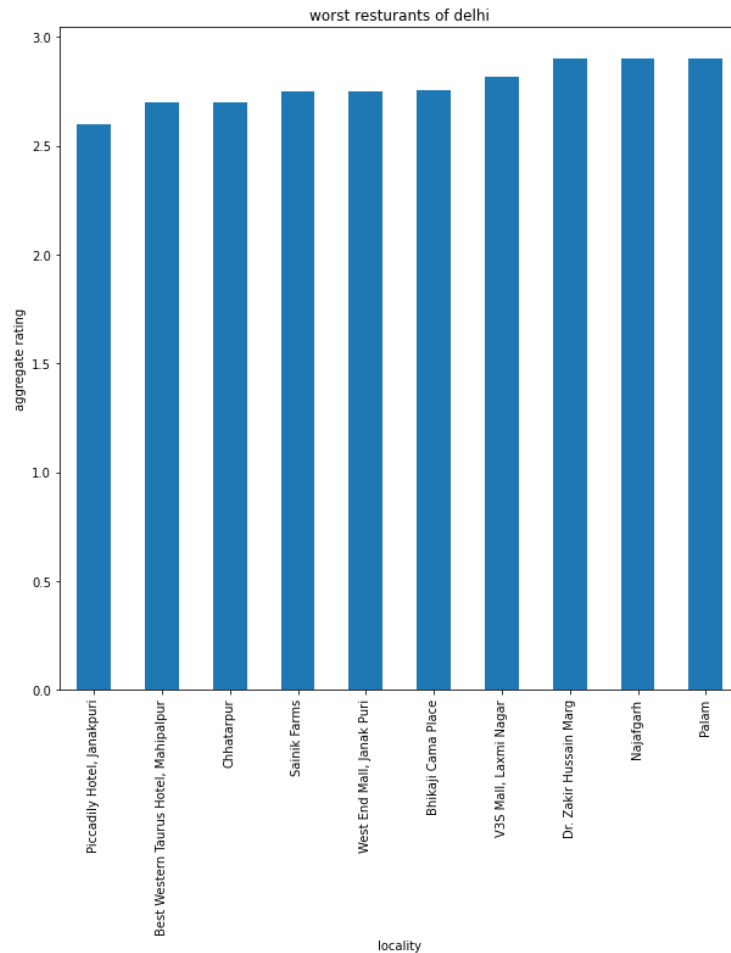
Surely any edible person not want to eat in piccadly.
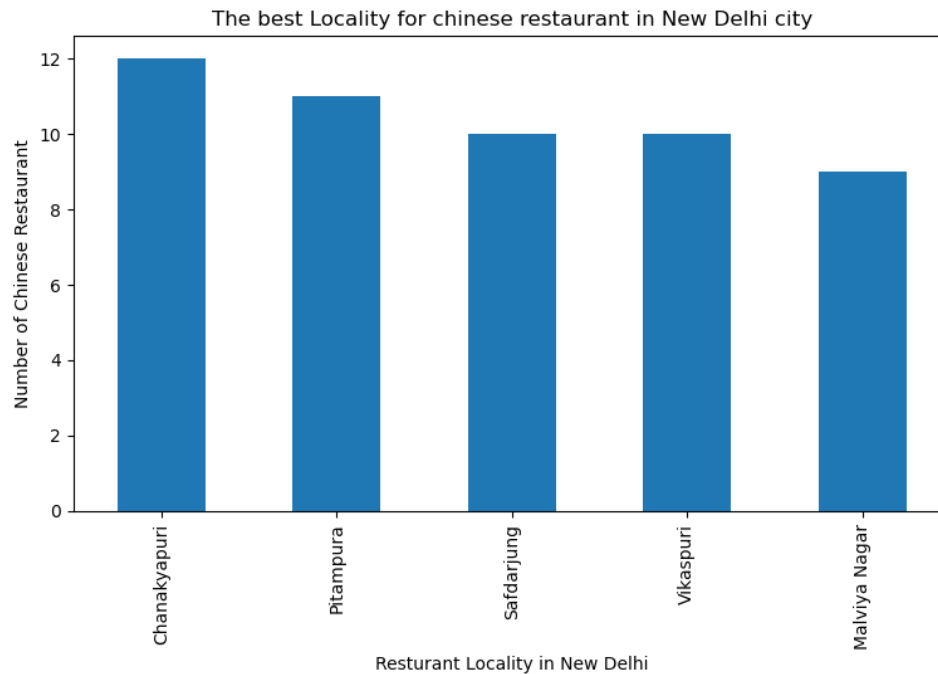
3.4 Which locality have highest no of restaurants?

The highest number of Restaurant available in Locality of New Delhi
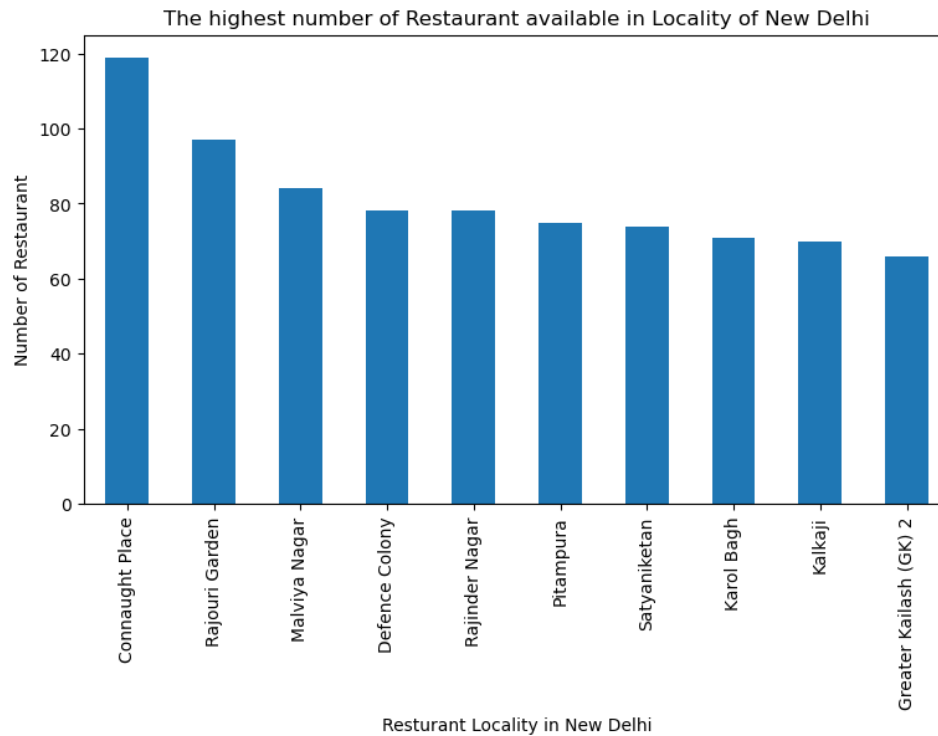
3.5 Which locality have lowest no of restaurants?

The lowest number of Restaurant available in Locality of New Delhi

3.6 What are best places for chinese cuisines restaurants in delhi?

The best Locality for chinese restaurant in New Delhi city

4. Modeling

Here the data given is unsupervised. So I decided to use clustering the dataset and found some common characteristics between locality. I have applied kmeans clustering algorithm to cluster the dataset and visualize clusters in map that was built using folium library.

5.Conclusion

Chanakyapuri, Pitampura, Safdarjung are some of the best neighborhoods for Chinese cuisine. .Pancsheel park, Nehru place have the best Chinese Resturant. .Cannaught place, Rajouri garden, Malviya nagar are the best places for edible person. .Greater kailash, Feroze shah road, Saket have best resturants in New Delhi. #### Cluster 1: It is most recommended for Indian Restaurants. #### Cluster 2: It is most recommended for Hotels and nightclub. #### Cluster 3 and Cluster 5: It is most recommended for Fast food. #### Cluster 4: It is most recommended for the cafe and pizza.

6.Future directions

From my point view rating on app can be different from what a real scenario is. So

there is one more feature I want to add that live rating should be taken from customer. I know these data are hard to extract but it will make model more efficient and one more thing suppose there is a restaurant A whose rating is 5 but only reviewd by 2 customer and one restaurant B has rating 4 but review by 100 customer ,according to our data restaurant A come top in our list but it may be wrong because that 2 customers who review restaurant A are somehow associated with that restaurant.