

Location Analysis for New Restaurant Opening

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1. Introduction

Opening a restaurant is a difficult undertaking. But the work is more manageable if broken down into different sub-tasks. There are many tasks which need to be taken care of while opening a restaurant. Some of them are the following (if the person already has the required funds):

1. Choose a restaurant concept
2. Form the menu items
3. Write the restaurant business plan
4. Choose a location
5. Permits and Licenses etc.

This assignment focuses on point 4 – Choose a location, to open a restaurant in the city of Bangalore (Bengaluru), Karnataka, India.

When choosing a location for a new restaurant, the following features are among the most important:

1. Visibility and accessibility
2. The demographics
3. Labour costs and minimum wage
4. Competition in the area etc.

So, what is Location Analysis? Location analysis is a technique for finding the best location to open a new restaurant. We need to analyse potential locations and their access to customers, their location in relation to equipment and food suppliers and other important factors.

So, choosing a good location for your business might be the single most effective thing to do, to get success. Having a good menu and professional staff is important to restaurant success but having a good location can give the necessary push for success in the restaurant business.

In this assignment we will try to find the optimal location to open a new restaurant in the city of Bangalore. Since there are lots of restaurants in Bangalore, we will try to detect locations that are not already crowded with restaurants. We would prefer locations which are close to the city centre as possible.

2. Data

Data has been collected from the following sources:

1. Dataset with various neighbourhoods and its Pin codes are collected from the link <https://finkode.com/ka/bangalore.html>. This dataset has the neighbourhoods with the pin codes and the district name.

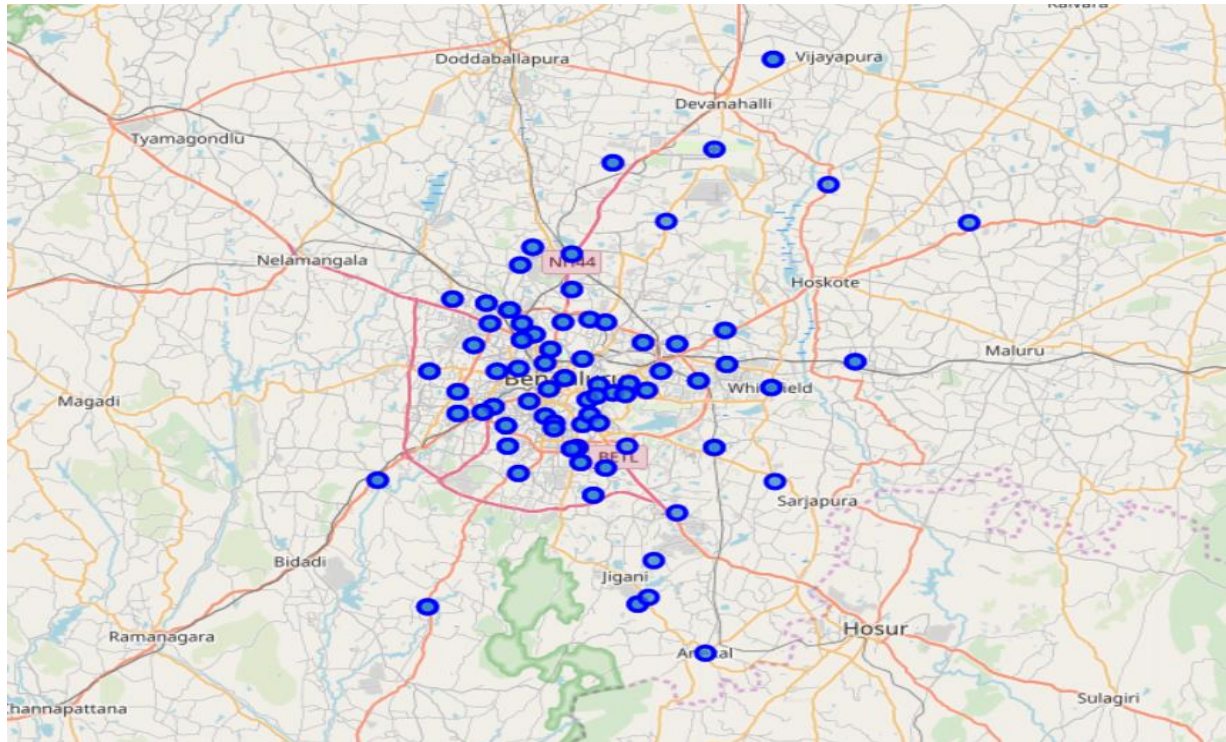
[211]:

	Post Office	District	Pincode
0	A F Station Yelahanka S.O	Bangalore	560063
1	Adugodu S.O	Bangalore	560030
2	Agara B.O	Bangalore	560034
3	Agram S.O	Bangalore	560007
4	Amruthahalli B.O	Bangalore	560092

2. geopy.geocoders is used to collect the geo coordinates for various neighbourhoods in Bangalore city.

[222]:

	postcode	neighbourhood	latitude	longitude
0	560001	M.G Road	12.973015	77.616612
1	560002	Bangalore City	12.979120	77.591300
2	560003	Malleswaram	13.016341	77.558664
3	560004	Basavanagudi	12.941726	77.575502
4	560006	J.C.Nagar	15.349723	75.137521
5	560007	Air Force Hospital	12.964027	77.627500



3. Foursquare API is used for collecting various venue details in the neighbourhoods of Bangalore city.

[231]:

	Neighbourhood	Neighbourhood Latitude	Neighbourhood Longitude	Venue	Venue_ID	Venue Latitude	Venue Longitude	Venue Category
0	M.G Road	12.973015	77.616612	The Oberoi	4b530849f964a520108d27e3	12.973457	77.618289	Hotel
1	M.G Road	12.973015	77.616612	Vivanta by Taj	4cbc9d194352a1cd453f9ff5	12.973365	77.619951	Hotel
2	M.G Road	12.973015	77.616612	Teppan	4faff6ade4b0c0e08eb8d691	12.975727	77.616879	Japanese Restaurant
3	M.G Road	12.973015	77.616612	Foodhall	4fabd03ae4b050ddf0aa376	12.973486	77.620117	Department Store
4	M.G Road	12.973015	77.616612	Benjarong	4bcaeaabfb84c9b639e91d3e	12.975615	77.616916	Thai Restaurant

As we are only doing location analysis for opening a new restaurant in the city, we will remove all other venue details from the dataset and keep only the venues which are restaurants.

So, the dataset will look like as below:

[31]:

	Neighbourhood	Neighbourhood Latitude	Neighbourhood Longitude	Venue	Venue_ID	Venue Latitude	Venue Longitude	Venue Category
2	M.G Road	12.973015	77.616612	Teppan	4faff6ade4b0c0e08eb8d691	12.975727	77.616879	Japanese Restaurant
4	M.G Road	12.973015	77.616612	Benjarong	4bcaeaabfb84c9b639e91d3e	12.975615	77.616916	Thai Restaurant
5	M.G Road	12.973015	77.616612	Yauatcha	523d691011d20523c79c04ca	12.973318	77.620072	Asian Restaurant
13	M.G Road	12.973015	77.616612	Cafe Mozaic	4ba270e9f964a52043f937e3	12.973642	77.619762	Restaurant
14	M.G Road	12.973015	77.616612	Le Jardin	4f484abfe4b0d63740f04e9a	12.973562	77.617864	French Restaurant

Based on the definition of our problem, factors that will influence our decisions are the following:

1. Number of existing restaurants in the neighbourhood.
2. Distance between the restaurants.
3. Distance of neighbourhood from the city centre.
4. We will even investigate various zones in Bangalore city and try to figure out the best place to open a restaurant in a zone as well.

3. Methodology

In this assignment we will focus on to find the best location to open a restaurant in the city of Bangalore. We will try to do a Location Analysis of the neighbourhoods of Bangalore. Since there are lots of restaurants in Bangalore, we will try to detect locations that are not already crowded with restaurants. We would prefer locations which are close to the city centre as possible.

Based on the definition of our problem, factors that will influence our decisions are the following:

1. Number of existing restaurants in the neighbourhood or Distance between the restaurants or Density of restaurants in a neighbourhood.
2. Distance of neighbourhood from the city centre.
3. We will even investigate various zones in Bangalore city and try to figure out the best place to open a restaurant in a zone as well.

We will give a score to the neighbourhood according to the above parameters and the neighbourhood with the best score will be the best place to open a restaurant in the city of Bangalore with the given data.

We will even have a cluster map of the neighbourhoods with restaurants.

4. Analysis

After doing the Foursquare API call for the neighbourhoods we had lot of data and our dataset was having all the venue categories. But we wanted only those neighbourhoods which contained any kind of restaurant as a venue category. So, we took out venue categories which didn't had restaurants in them and got the below dataset.

[377]:	Neighbourhood	Neighbourhood Latitude	Neighbourhood Longitude	Venue	Venue_ID	Venue Latitude	Venue Longitude	Venue Category
2	M.G Road	12.973015	77.616612	Teppan	4faff6ade4b0c0e08eb8d691	12.975727	77.616879	Japanese Restaurant
4	M.G Road	12.973015	77.616612	Benjarong	4bcaeabafb84c9b639e91d3e	12.975615	77.616916	Thai Restaurant
5	M.G Road	12.973015	77.616612	Yauatcha	523d691011d20523c79c04ca	12.973318	77.620072	Asian Restaurant
13	M.G Road	12.973015	77.616612	Cafe Mozaic	4ba270e9f964a52043f937e3	12.973642	77.619762	Restaurant
14	M.G Road	12.973015	77.616612	Le Jardin	4f484abfe4b0d63740f04e9a	12.973562	77.617864	French Restaurant

[760]: df_venues.shape

[760]: (273, 8)

Checking the neighbourhoods with respective number of restaurants (any kind of restaurant) in them. This count of restaurants in the neighbourhood will be used to calculate the score for the neighbourhood.

From the data we can see the neighbourhood 'Kormangala' has the highest number of restaurants.

```
[378]: Neighbourhood
Kormangala 50
Jayanagar 27
M.G Road 18
Jayanagar 3rd Block 17
HSR Layout 13
J P Nagar 12
Indiranagar 11
NAL 11
Seshadripuram 9
Bannerghatta Road 7
Basaveshwaranagar 7
Domlur 6
Chikkalasandra 5
Dharmaram College 5
Banaswadi 5
Basavanagudi 5
Sadashivanagar 5
Chamrajpet 4
Bangalore International Airport 4
Hoodi 3
```

```
[379]: print('There are {} uniques categories.'.format(len(df_venues['Venue Category'].unique()))) #checking unique categories.
There are 33 uniques categories.
```

```
[380]: print('There are {} neighbourhoods.'.format(len(df_venues['Neighbourhood'].unique()))) #checking the number of neighbourhoods.
There are 50 neighbourhoods.
```

We will do clustering of the neighbourhoods by using KMeans Algorithm and we can find the which neighbourhoods are similar according to the venue details.

To do clustering we will do onehot encoding for the categorical data of venue details and group the dataset by neighbourhoods.

Grouping by neighbourhoods will bring down our dataset rows count to 50 from 273 as shown above.

Grouping with Onehot Encoding.

```
[383]:
```

	Neighbourhood	Afghan Restaurant	American Restaurant	Andhra Restaurant	Asian Restaurant	Chettinad Restaurant	Chinese Restaurant	Comfort Food Restaurant	Eastern European Restaurant	Fast Food Restaurant	French Restaurant	Indian Restaurant	Italian Restaurant	Japanese Restaurant
0	Amruthahalli	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0
1	Anandnagar	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0
2	Ashoknagar	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0
3	Austin Town	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.5	0.0
4	Bagalgunte	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

```
[384]: df_grouped.shape
```

```
[384]: (50, 34)
```

KMeans Clustering on the neighbourhoods based on the venue category details.

[723]:

	Postcode	Neighbourhood	Latitude	Longitude	Distance	Cluster Labels	1st Most Common Venue	2nd Most Common Venue	3rd Most Common Venue	4th Most Common Venue	5th Most Common Venue	6th Most Common Venue	7th Most Common Venue	8th Most Common Venue
0	560001	M.G Road	12.973015	77.616612	0.000000	2.0	Restaurant	Chinese Restaurant	Indian Restaurant	Thai Restaurant	Asian Restaurant	Japanese Restaurant	Mediterranean Restaurant	Modern European Restaurant
1	560002	Bangalore City	12.979120	77.591300	2.828110	0.0	Restaurant	Indian Restaurant	Eastern European Restaurant	Karnataka Restaurant	Japanese Restaurant	Italian Restaurant	French Restaurant	Fast Food Restaurant
2	560003	Malleswaram	13.016341	77.558664	7.905429	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN
3	560004	Basavanagudi	12.941726	77.575502	5.646159	0.0	Indian Restaurant	Restaurant	Mediterranean Restaurant	Eastern European Restaurant	Karnataka Restaurant	Japanese Restaurant	Italian Restaurant	French Restaurant
4	560006	J.C.Nagar	15.349723	75.137521	375.187845	4.0	Vegetarian / Vegan Restaurant	Indian Restaurant	Fast Food Restaurant	Kerala Restaurant	Karnataka Restaurant	Japanese Restaurant	Italian Restaurant	French Restaurant

The dataset above contains clustering data merged with our neighbourhood dataset. So there are few 'NaN' values which we will remove and our clustered dataset with neighbourhood details will look as below.

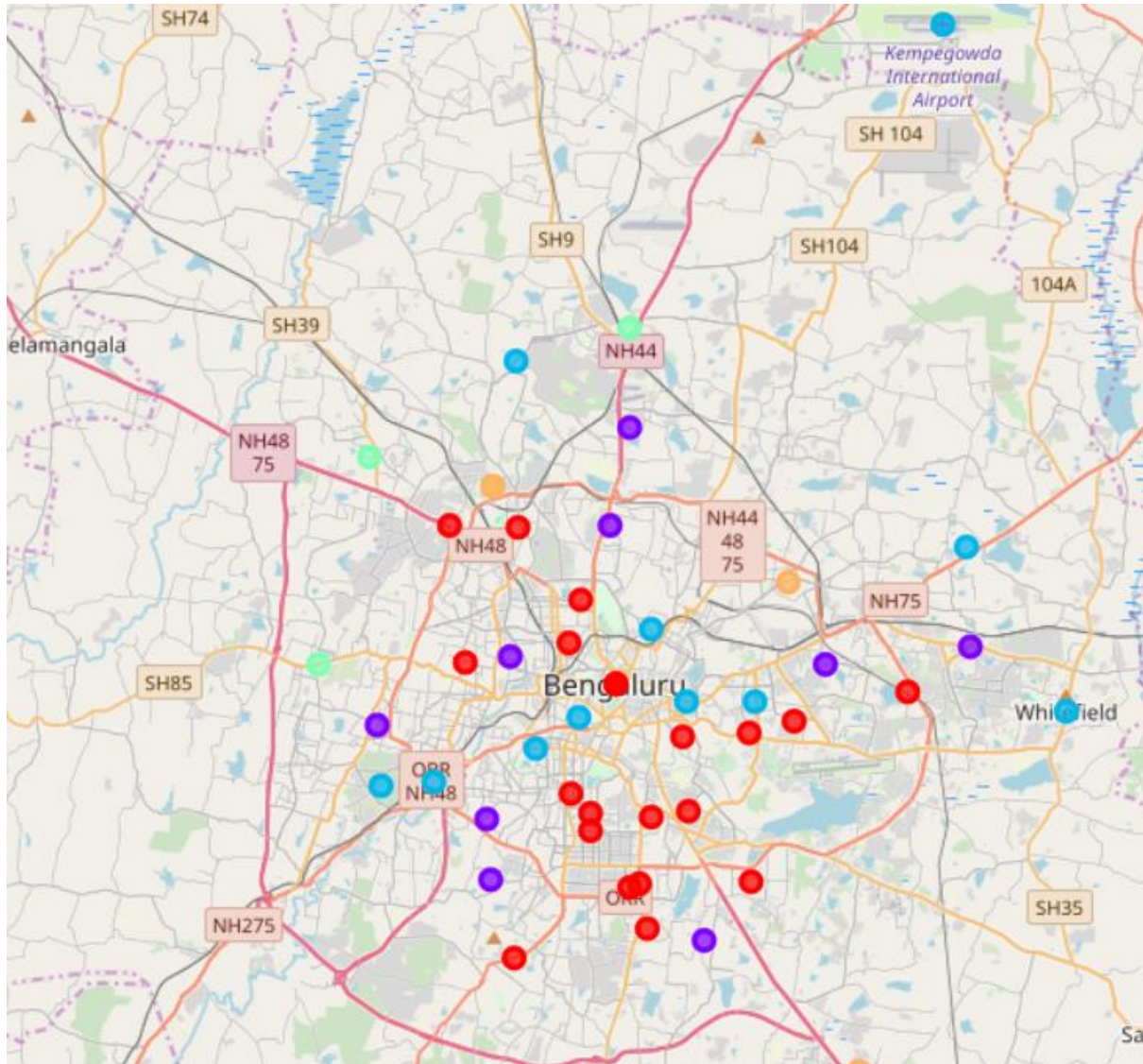
[727]:

	postcode	neighbourhood	latitude	longitude	distance	Cluster Labels	1st Most Common Venue	2nd Most Common Venue	3rd Most Common Venue	4th Most Common Venue	5th Most Common Venue	6th Most Common Venue	7th Most Common Venue	8th Most Common Venue
0	560001	M.G Road	12.973015	77.616612	0.000000	1.0	Hotel	Clothing Store	Restaurant	Café	Indian Restaurant	Chinese Restaurant	Bar	Thai Restaurant
1	560002	Bangalore City	12.979120	77.591300	2.828110	0.0	Park	Restaurant	Indian Restaurant	Capitol Building	Donut Shop	Diner	Dhaba	Dessert Shop
2	560003	Malleswaram	13.016341	77.558664	7.905429	1.0	Coffee Shop	Department Store	Bar	Juice Bar	Convenience Store	Coworking Space	Creperie	Cupcake Shop
3	560004	Basavanagudi	12.941726	77.575502	5.646159	0.0	Indian Restaurant	Café	Tea Room	Hookah Bar	Snack Place	Metro Station	Road	Restaurant
4	560006	J.C.Nagar	15.349723	75.137521	375.187845	0.0	Food Court	Hotel	Vegetarian / Vegan Restaurant	Indian Restaurant	Bed & Breakfast	Bus Station	Café	Dhaba

The above dataset also shows the most common venue details in the neighbourhoods. But we will not focus on it as it is out of scope of our assignment. We will not focus which is the top venue category in a neighbourhood, we will only focus on one venue category which is restaurants.

Our all focus will be on those venue categories which contains restaurants in them.

Map clusters of the neighbourhoods of city Bangalore.



The different colouring shows different clusters. KMeans algorithm clustered different neighbourhoods into one cluster based on the venue details we got from the Foursquare API.

We can even see the details of all the clusters, but that's not our focus in this assignment so will skip it.

So, our final dataset after clustering with different venue categories is given below:

[731]:

	Postcode	Neighbourhood	Latitude	Longitude	Distance	Cluster Labels	1st Most Common Venue	2nd Most Common Venue	3rd Most Common Venue	4th Most Common Venue	5th Most Common Venue	6th Most Common Venue	7th Most Common Venue
24	560034	Kormangala	12.935468	77.617210	4.154379	0.0	Indian Restaurant	Chinese Restaurant	Restaurant	Italian Restaurant	Fast Food Restaurant	Mexican Restaurant	Asian Restaurant
30	560041	Jayanagar	12.929273	77.582423	6.097561	0.0	Indian Restaurant	Chinese Restaurant	Restaurant	Fast Food Restaurant	Mexican Restaurant	Andhra Restaurant	Chettinad Restaurant
0	560001	M.G Road	12.973015	77.616612	0.000000	2.0	Restaurant	Chinese Restaurant	Indian Restaurant	Thai Restaurant	Asian Restaurant	Japanese Restaurant	Mediterranean Restaurant
8	560011	Jayanagar 3rd Block	12.934705	77.582714	5.611704	0.0	Indian Restaurant	Chinese Restaurant	Restaurant	Andhra Restaurant	Asian Restaurant	Fast Food Restaurant	Karnataka Restaurant
70	560102	HSR Layout	12.911623	77.638862	7.208249	0.0	Indian Restaurant	Fast Food Restaurant	Mediterranean Restaurant	Punjabi Restaurant	Chettinad Restaurant	North Indian Restaurant	Seafood Restaurant

Now let's calculate the Score for the neighbourhoods depending on the parameter which we discussed earlier above and insert into our df_merged.

the Score will total of 10 points.

the Score is divided equally into two parameters:

1. Distance of neighbourhood from the city centre. (maximum of 5 points and minimum of 1 point).
2. Number of restaurants in the neighbourhood. (maximum of 5 points and minimum of 1 point).

calculation of Distance of neighbourhood from the city centre.

Note: distance in df_merged is in KM.

- a. distance 0 to 5 km -> 5points
- b. distance 6 to 10 km -> 4points
- c. distance 11 to 18 km -> 3points
- d. distance 19 to 25 km -> 2points
- e. distance 26 and more than 26 km -> 1point

calculation of Number of existing restaurants in the neighbourhood.

- a. no. of restaurants 0 to 10 -> 5points
- b. no. of restaurants 11 to 15 -> 4points
- c. no. of restaurants 16 to 25 -> 3points
- d. no. of restaurants 26 to 30 -> 2points
- e. no. of restaurants 31 and more than 31 -> 1point

so, we will take points from both the parameters and give a final score out of 10 to the neighbourhood.

The neighbourhood with the highest score will be the best place to open a new restaurant in the city of Bangalore with the given data

and with the above parameters.

We will even merge the zonal data with our final dataset and check the results for each zone available in Bangalore.

df_merged:

[731]:

	Postcode	Neighbourhood	Latitude	Longitude	Distance	Cluster Labels	1st Most Common Venue	2nd Most Common Venue	3rd Most Common Venue	4th Most Common Venue	5th Most Common Venue	6th Most Common Venue	7th Most Common Venue
24	560034	Kormangala	12.935468	77.617210	4.154379	0.0	Indian Restaurant	Chinese Restaurant	Restaurant	Italian Restaurant	Fast Food Restaurant	Mexican Restaurant	Asian Restaurant
30	560041	Jayanagar	12.929273	77.582423	6.097561	0.0	Indian Restaurant	Chinese Restaurant	Restaurant	Fast Food Restaurant	Mexican Restaurant	Andhra Restaurant	Chettinad Restaurant
0	560001	M.G Road	12.973015	77.616612	0.000000	2.0	Restaurant	Chinese Restaurant	Indian Restaurant	Thai Restaurant	Asian Restaurant	Japanese Restaurant	Mediterranean Restaurant
8	560011	Jayanagar 3rd Block	12.934705	77.582714	5.611704	0.0	Indian Restaurant	Chinese Restaurant	Restaurant	Andhra Restaurant	Asian Restaurant	Fast Food Restaurant	Karnataka Restaurant
70	560102	HSR Layout	12.911623	77.638862	7.208249	0.0	Indian Restaurant	Fast Food Restaurant	Mediterranean Restaurant	Punjabi Restaurant	Chettinad Restaurant	North Indian Restaurant	Seafood Restaurant

Get Bangalore Zonal data - The Neighbourhoods in Bangalore are divided into different zones.

[762]:

	Neighbourhood	Zone
0	Amruthahalli	Northern
1	Anandnagar	Northern
2	Ashoknagar	Central
3	Austin Town	Central
4	Bagalgunte	Northern
5	Banashankari III Stage	Western
6	Banaswadi	Northern
7	Bangalore City	Central
8	Bangalore International Airport	Outskirt
9	Bangalore University	Western

We got the following zones in Bangalore:

Central

Eastern

Northern

Southern

Western

Outskirt (for neighbourhoods in outskirts of Bangalore)

So, we calculate the scores of the neighbourhoods and give them a zone. And our dataset looks like below:

[745]:

	index	Postcode	Neighbourhood	Latitude	Longitude	Distance	Venue Category	Score	Zone	Cluster Labels	1st Most Common Venue	2nd Most Common Venue	3rd Most Common Venue	4th Most Common Venue	5th Most Common Venue
25	37	560050	Ashoknagar	12.979120	77.591300	2.828110	2	10	Central	0.0	Restaurant	Indian Restaurant	Eastern European Restaurant	Karnataka Restaurant	Japanese Restaurant
21	33	560046	Benson Town	12.997803	77.604175	3.056261	1	10	Central	2.0	Pakistani Restaurant	Vietnamese Restaurant	Fast Food Restaurant	Karnataka Restaurant	Japanese Restaurant
26	38	560053	Chickpet	12.968003	77.578642	4.156842	2	10	Central	2.0	Middle Eastern Restaurant	South Indian Restaurant	Vietnamese Restaurant	Eastern European Restaurant	Japanese Restaurant
1	1	560002	Bangalore City	12.979120	77.591300	2.828110	2	10	Central	0.0	Restaurant	Indian Restaurant	Eastern European Restaurant	Karnataka Restaurant	Japanese Restaurant
34	50	560071	Domlur	12.962467	77.638196	2.616447	6	10	Central	0.0	Indian Restaurant	Vietnamese Restaurant	Rajasthani Restaurant	Italian Restaurant	Chinese Restaurant
22	34	560047	Austin Town	12.961274	77.615294	1.306855	2	10	Central	0.0	Indian Restaurant	Italian Restaurant	Vietnamese Restaurant	Mediterranean Restaurant	American Restaurant
14	21	560029	Dharmaram College	12.933841	77.604203	4.538165	5	10	Southern	0.0	Indian Restaurant	Kerala Restaurant	Middle Eastern Restaurant	Fast Food Restaurant	Karnataka Restaurant
48	71	560103	Bellandur	12.979120	77.591300	2.828110	2	10	Eastern	0.0	Restaurant	Indian Restaurant	Eastern European Restaurant	Karnataka Restaurant	Japanese Restaurant
37	54	560076	Bannerghatta Road	12.910639	77.600046	7.130945	7	9	Southern	0.0	Indian Restaurant	Udupi Restaurant	Fast Food Restaurant	Punjabi Restaurant	Vietnamese Restaurant
5	7	560010	Rajajinagar	12.988234	77.554883	6.905588	1	9	Western	1.0	Indian Restaurant	Vietnamese Restaurant	Mediterranean Restaurant	American Restaurant	Andhra Restaurant

So, from the results above we can see that 8 neighbourhoods have got full 10 points. The neighbourhoods with highest points are the best neighbourhoods to open a new restaurant.

So, there are at least 8 neighbourhoods in Bangalore city where a new restaurant can be opened.

Top 10 neighbourhoods to open a new restaurant.

```
[747]: 25          Ashoknagar
        21          Benson Town
        26          Chickpet
        1          Bangalore City
        34          Domlur
        22          Austin Town
        14    Dharmaram College
        48          Bellandur
        37    Bannerghatta Road
        5          Rajajinagar
```

Below are the top 10 neighbourhoods where not to open a new restaurant.

```
[749]: 2      Basavanagudi
       7      Jalahalli
       44     C.V.Raman Nagar
       30     Chikkalasandra
       8      Jalahalli East
       11     Seshadripuram
       18     Nayandahalli
       20     Banaswadi
       40     Sadashivanagar
       6      Jayanagar 3rd Block
```

We can even show the various zones in Bangalore and can show the best neighbourhoods to open a new restaurant in these zones.

Central Zone:

[752]:

	index	Postcode	Neighbourhood	Latitude	Longitude	Distance	Venue Category	Score	Zone	Cluster Labels	1st Most Common Venue
	1	560002	Bangalore City	12.979120	77.591300	2.828110	2	10	Central	0.0	Restaurant
	21	560046	Benson Town	12.997803	77.604175	3.056261	1	10	Central	2.0	Pakistani Restaurant
	22	560047	Austin Town	12.961274	77.615294	1.306855	2	10	Central	0.0	Indian Restaurant

Northern Zone:

[753]:

	index	Postcode	Neighbourhood	Latitude	Longitude	Distance	Venue Category	Score	Zone	Cluster Labels	1st Most Common Venue
	13	560024	Anandnagar	13.033377	77.589523	7.295879	1	9	Northern	1.0	Indian Restaurant
	27	560054	Mathikere	13.032888	77.557374	9.228910	2	9	Northern	0.0	American Restaurant
	29	560057	Peenya Dasarahalli	13.033019	77.533201	11.222554	2	8	Northern	0.0	Fast Food Restaurant

Like this we can show top neighbourhoods to open a new restaurant in all the zones.

5. Results and Discussion

Our results show that there are many neighbourhoods in the Bangalore city where a person can open a new restaurant. Out of all the 100+ neighbourhoods that we took in the beginning, we only took those neighbourhoods which had the Venue Categories which contains any kind of restaurants. And in that set of neighbourhoods we found the best neighbourhoods to open a new restaurant based on the score calculated from the 2 parameters: distance of the neighbourhood from the city centre and no. of restaurants already present in the neighbourhood.

We have done a proper Exploratory Data Analysis (EDA) of the data we got for our Bangalore city neighbourhoods. We pulled the various neighbourhoods of Bangalore and correct few names of the neighbourhoods so that we can get good venue details of them. After that we got the coordinates details of the neighbourhoods and distance of the neighbourhoods from the city centre using geopy and tried to plot a map of the city of Bangalore with the neighbourhoods.

Then we pulled the venue details of the neighbourhoods and took out only those neighbourhoods which contained any kind of restaurants in their venue categories. On this dataset we did grouping of various types to analyse the neighbourhood and created onehot encoding for the venue categories. In the end tried to do clustering of the various neighbourhoods with this data.

And finally, we added the no. of restaurants in the neighbourhood in the dataset and calculated the score of the neighbourhoods by using the 2 parameters: distance of the neighbourhood from city centre and no. of restaurants already present in the neighbourhood. And the neighbourhoods which got the highest scores are our required neighbourhoods to open a new restaurant in the city of Bangalore.

top 10 neighbourhoods to open a new restaurant in Bangalore: Ashoknagar Benson Town Chickpet Bangalore City Domlur Austin Town Dharmaram College Bellandur Bannerghatta Road Rajajinagar

top neighbourhoods in the zones of Bangalore: Western -> Rajajinagar Southern -> Dharmaram College Eastern -> Bellandur Northern -> Anandnagar Central -> Bangalore City

So, this our result that we got for the city of Bangalore with neighbourhoods' details to open a new restaurant. This result is all based on the datasets that we have pulled.

6. Conclusion

In this assignment we focused on to find the best location to open a restaurant in the city of Bangalore. We will do a Location Analysis of the neighbourhoods of Bangalore. Since there are lots of restaurants in Bangalore, we tried to detect those locations that are not already crowded with restaurants. We preferred locations which are close to the city centre as well.

We have taken only 2 parameters to check whether a neighbourhood is good or not good to open a new restaurant. We can even have other parameters like demography of the neighbourhood like population, literacy rate, sex ratio etc., traffic, labour costs in the neighbourhood etc. So, like this we can take the best parameters we need for our data analysis and do a Location Analysis on a Neighbourhood and we can find which neighbourhoods are best for opening a new restaurant. This same methodology can be used for any kind of business with

respective parameters to be used. We can even do a Business Analysis. With the power of Data Analysis and ML/AI we can always find great insights of things which we don't see from outside. This is a very powerful tool it works like Magic!