Battle of Neighbourhoods

Introduction/ Business Problem

In this project we try to find a optimal location to start Mexican Resturant in the city of Puducherry(Pondicherry), India. Puducherry city, lies in the south-India facing the sea "Bay of Bengal" and is surrounded by the state of Tamil Nadu with which it shares most of its culture and language. Puducherry, once colnized by French is one of unique place in India and attracts many tourist.

Opening of Mexican Restaurant

As the city was part of French Territory and still holds French culture, many French and Italian resturants already present there apart from Indian resturants. So,as part of business problem, we wish to find a appropriate location to start a Mexican resturant, so that to attract more tourist. The challenge is to find a suitable location for opening a new hotel / restaurant attracted to all local and foreign people in the centre of the town.

Data Used

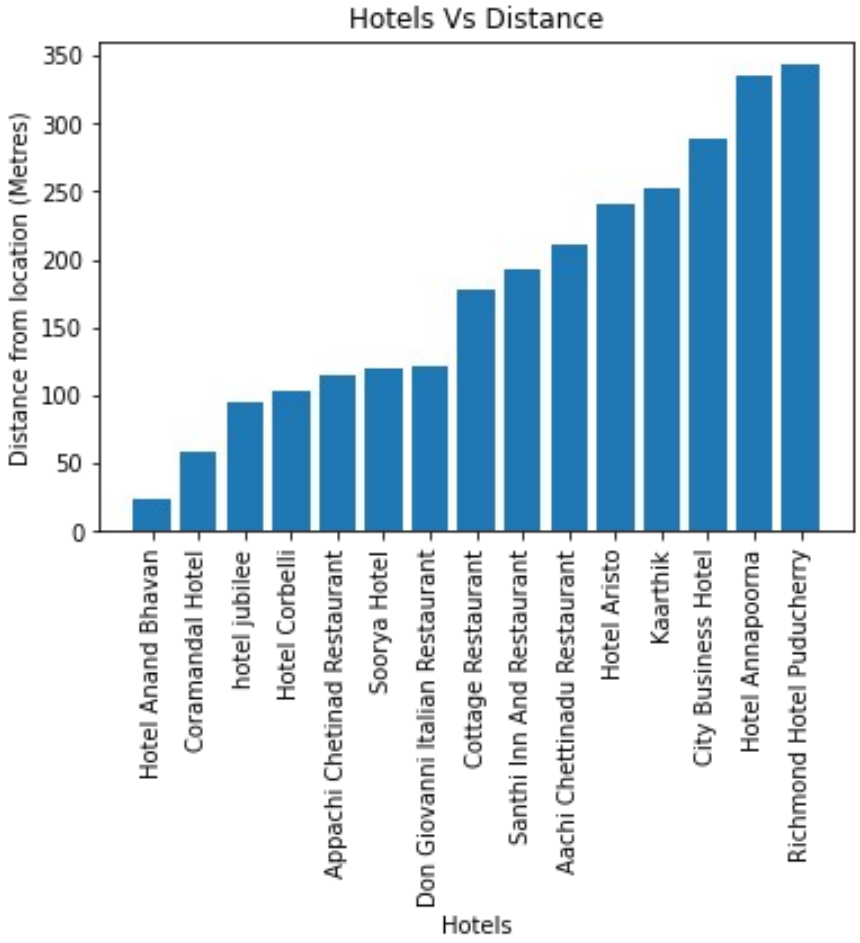
We will be completely working on Foursquare data to explore and try to locate appropriate venue to start our new hotel and to check the distance form the tourist spot like church, temples, beach, museums, memorials that are present nearby.

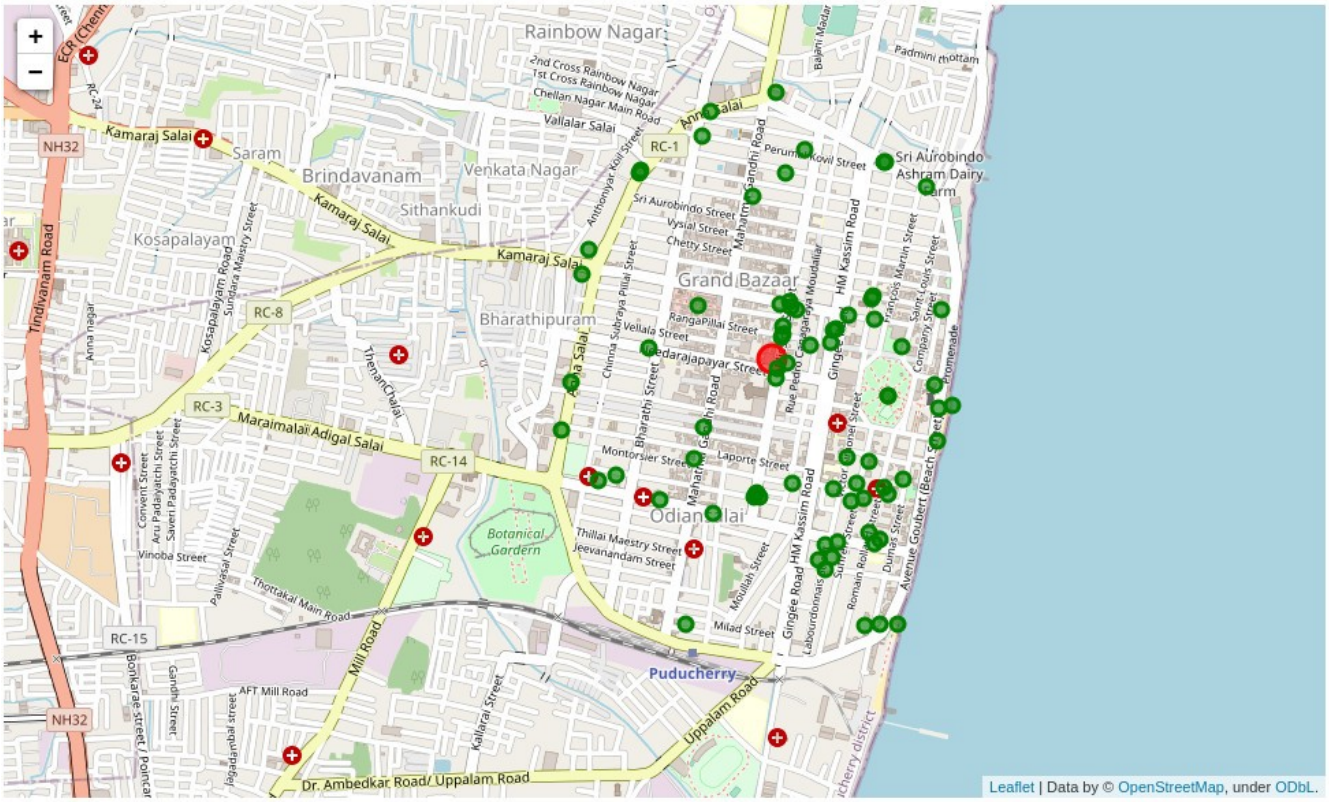
Methodology section

In this sections, we try to perform some data analysis to find insight from data and understand the current stats of all the given data. We try to identify the heart fo the city. We tried to extract the existing information of hotel/resturanant, catogarise them. We also identify other important tourist spot like church, temple, museum located at a closer distance.

Results

The below plot gives the information about list the list of hotels existing nearby the heart of the city.



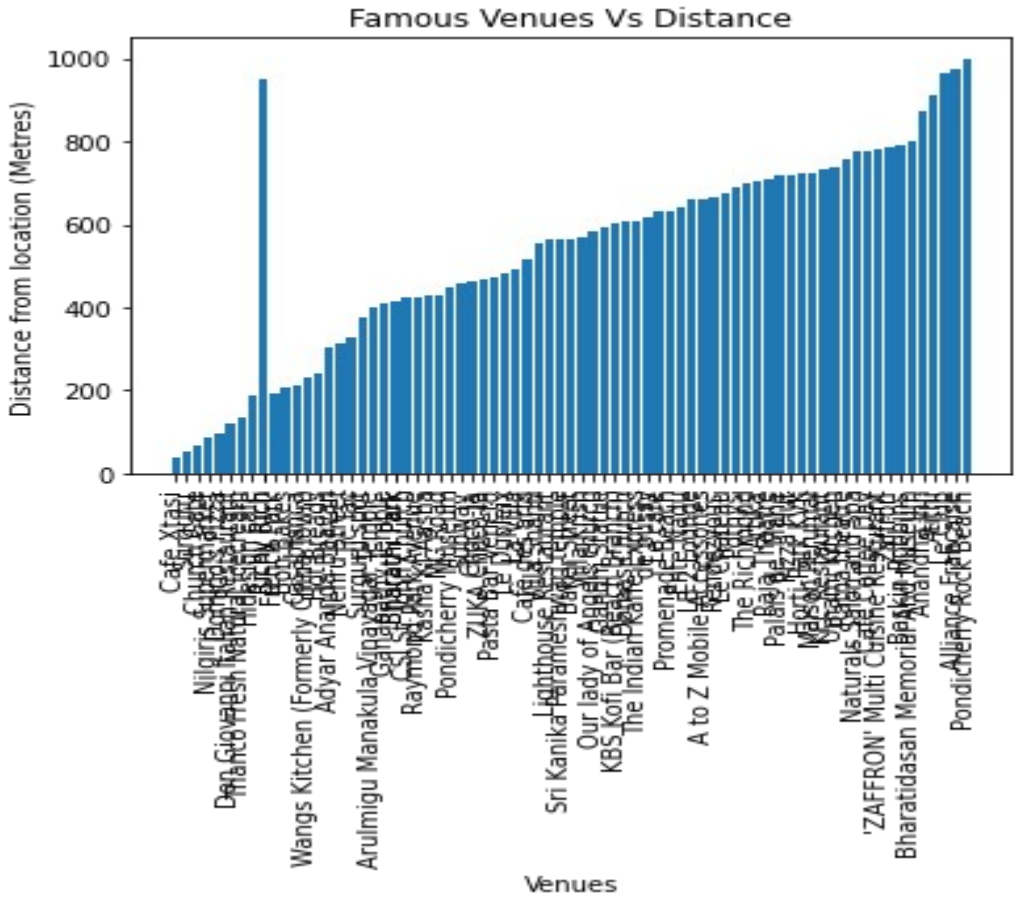


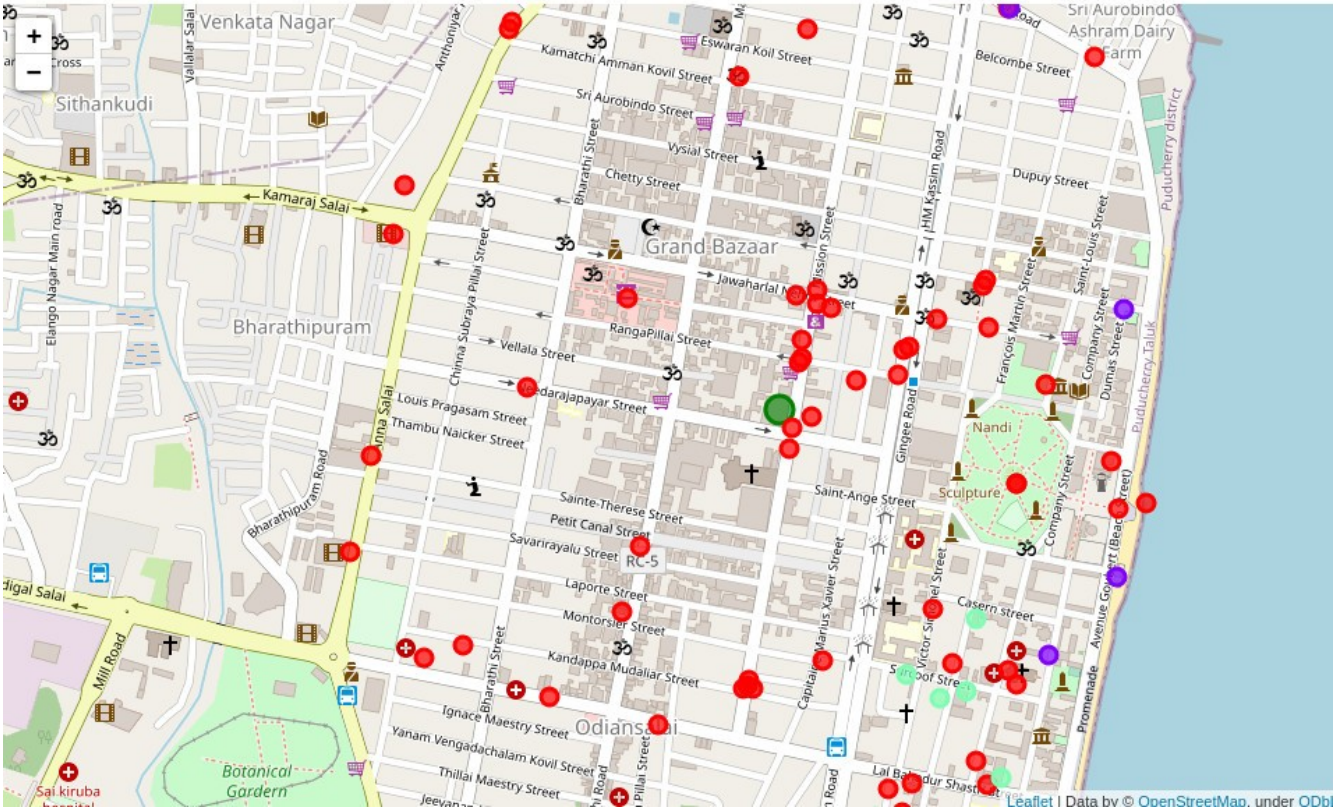
Here, using foursquare methodology, we could able to identify other important spot like Temple, church, parks etc, which located at the heart of the city.

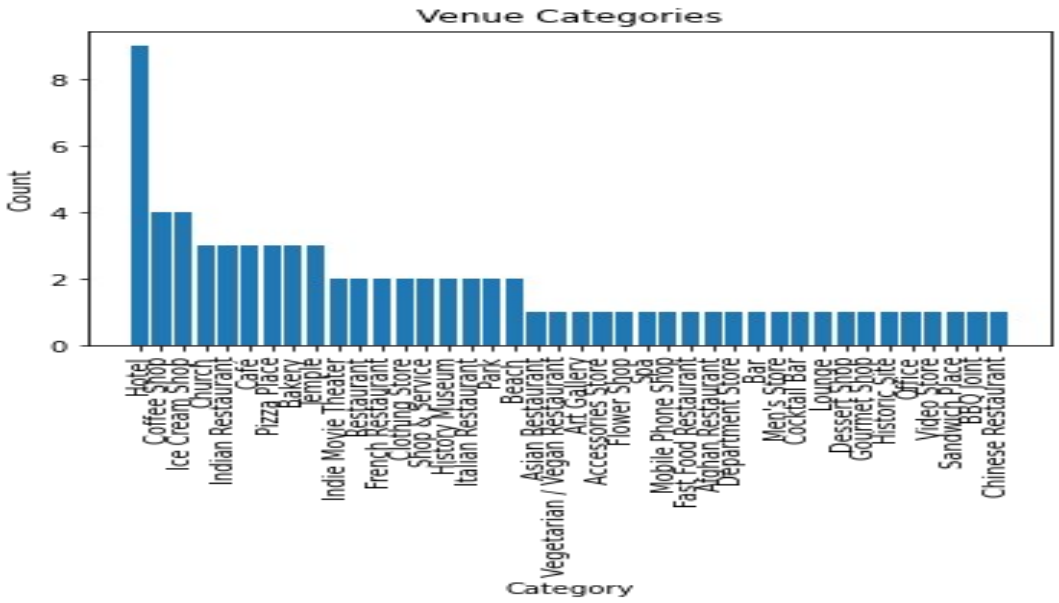
name	categories	distance	lat	lng	id	
0	Arulmigu Manakula Vinayagar Temple	Temple	400	11.935932	79.833786	4e1868ceb0fb8567c66bf190
1	Ganapathy Temple	Temple	410	11.936017	79.833835	51fdd3b6498e6da0a4a14e9e
2	Sri Kanika Parameshwari temple	Temple	563	11.939080	79.830033	511afc76e4b01dae781a79aa
0	Domas Church	Church	608	11.929928	79.834307	51fdd98f498ea0097cf260ea
1	Church Gate	Gourmet Shop	66	11.933475	79.830799	4d14affabb64224b59beae65
2	CSI St. John Church	Church	422	11.931057	79.833020	51d80b46498eb3b0f95ffb19
3	Our lady of Angels church	Church	582	11.930130	79.834180	527f1bc711d2bbc52930cdfa
0	Bharathi Park	Park	416	11.932934	79.834294	5014c4e9e4b097af8abacef9
1	French Park	Clothing Store	192	11.935769	79.830910	5c820a4d603d2a002ce459d1
2	Raymond Park Avenue	Men's Store	423	11.934395	79.826774	51e402ce498e6f1752d3add3
3	Hotel Sun Park	Hotel	440	11.933550	79.826635	50189effe4b0deb6b21fe553
4	Horti-Park KVK	Flower Shop	725	11.930330	79.825185	5285896411d23c159db20304
0	Pondicherry Museum	History	448	11.934437	79.834746	4e2fa796149532963306e9da

name	categories	distance	lat	lng	id	
		Museum				
1	Bharatidasan Memorial And Museum	History Museum	800	11.940926	79.828480	5a2e3504a22db744e2d619b7

we catogarise them according to the distance and used clustering alogithem to identify the apporopriate location.





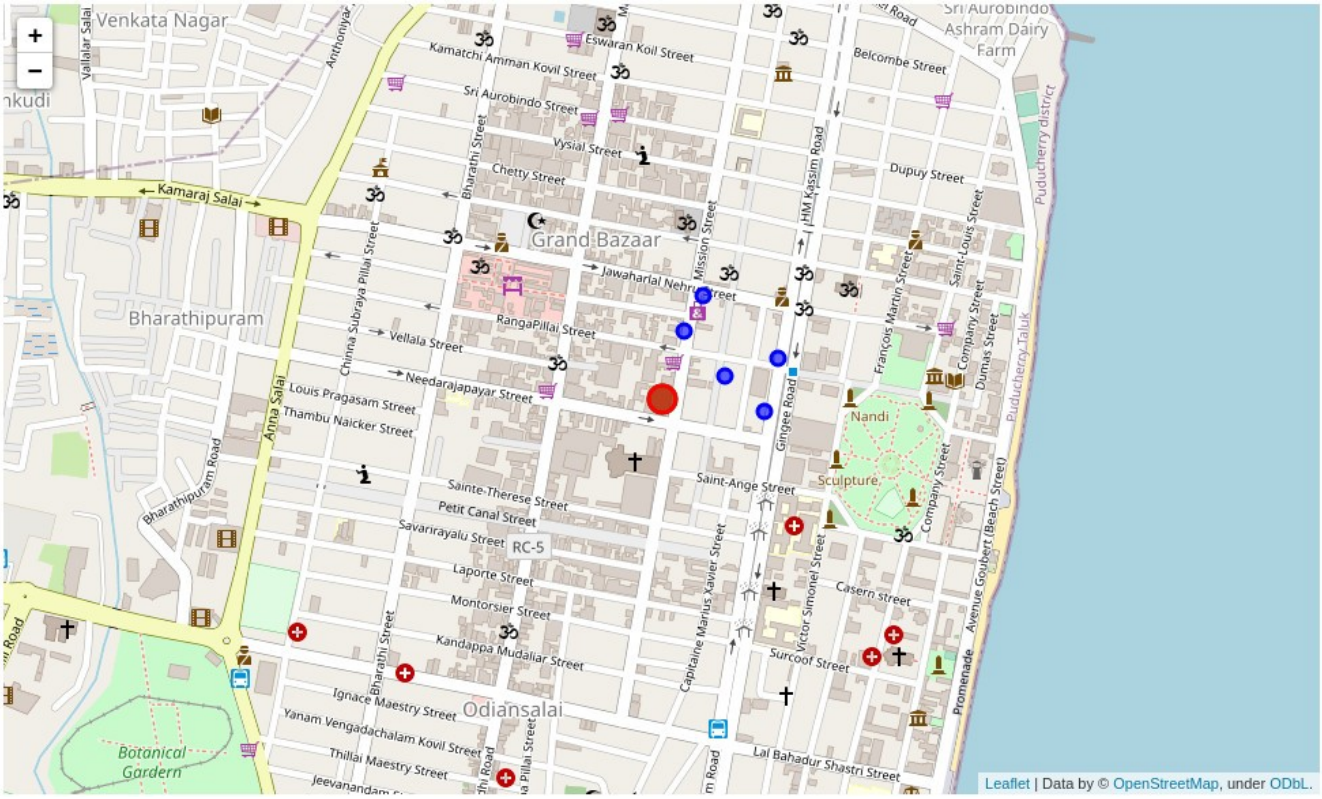


Discussion

From above reports,we could get an idea why the predicted one is pointed/clustered on the given spot. First, most thing could be the center of attraction for the place. KMeans have figured out the most common place for all the venues.This output was very adjacent to the core location.This proves the accurate spotting of our predicted algorithm. Despite of the findings,there were some lack in data.Tips

and ratings were missing for most of the venues. Also when I compared foursquare data with google map ,i could see there were many hotels and venues found missing in foursquare.

From the result, below I am giving the appropriate location to start a new Mexican resturant which will surely attract both the locals and the tourist.



Conclusion

As a business person,one would be able to set up a hotel/restaurant on given spot.This will bring revenue automatically as we have located in very near to core one.We proved this with Kmeans.

Future Expectation:

As mentioned earlier,most of data needs to be extracted from googlemaps.Even though we got somewhat accurate prediction.To be very confident on concluding our output,we may need more data to analyse.

Research based on hotel reviews and restaurant menus could be used for future purpose.

My Experience:

It was wonderful journey for me in IBM capstone and other courses.It can aid to layman people as well who dont know a pinch of Data science.Thanks to Coursera for keeping Skilful instructors with their awesome materials

THANK YOU!!