

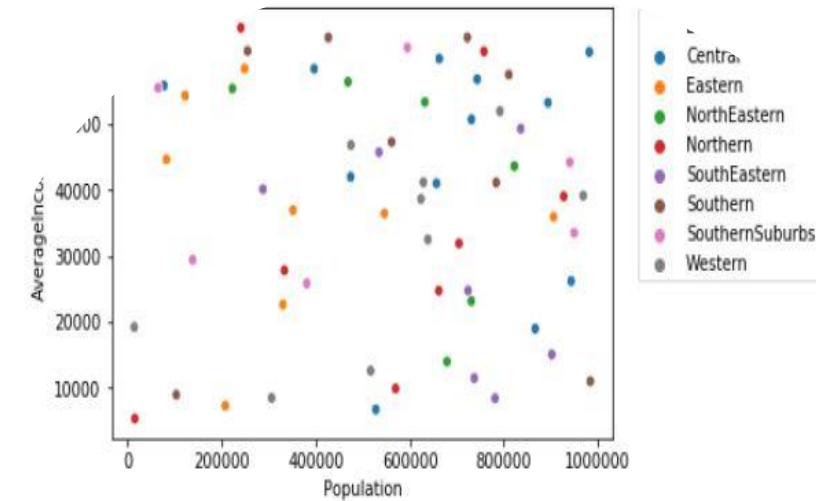
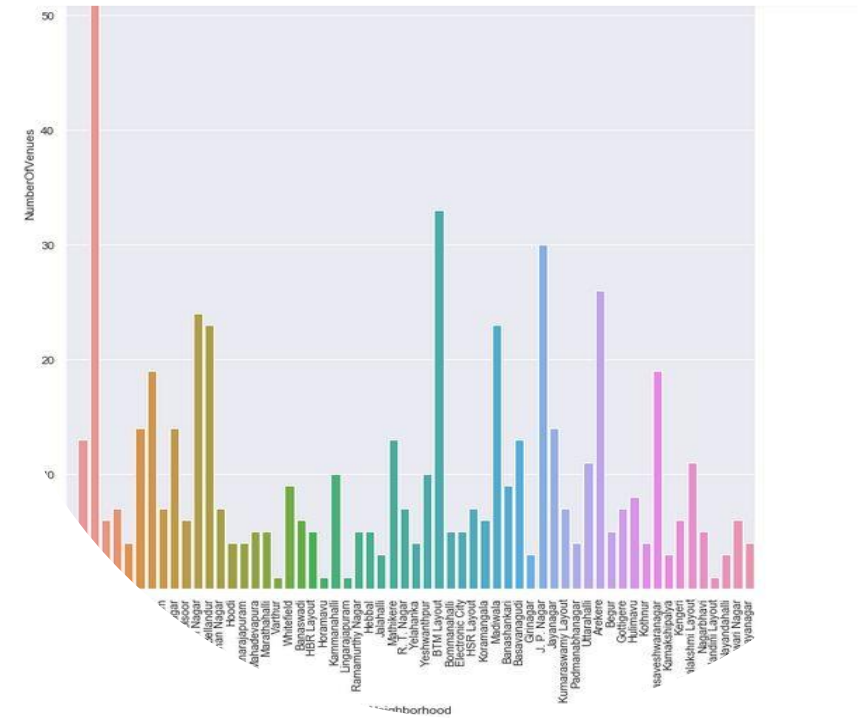
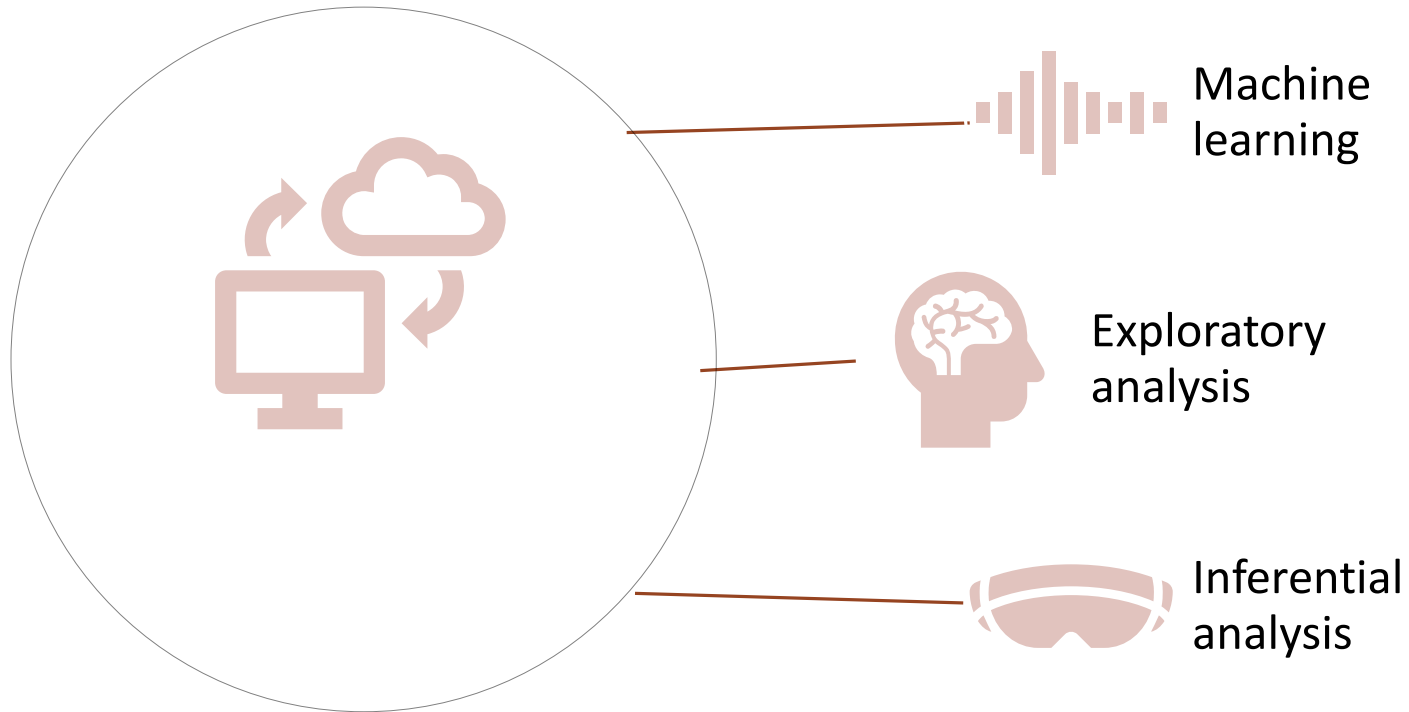


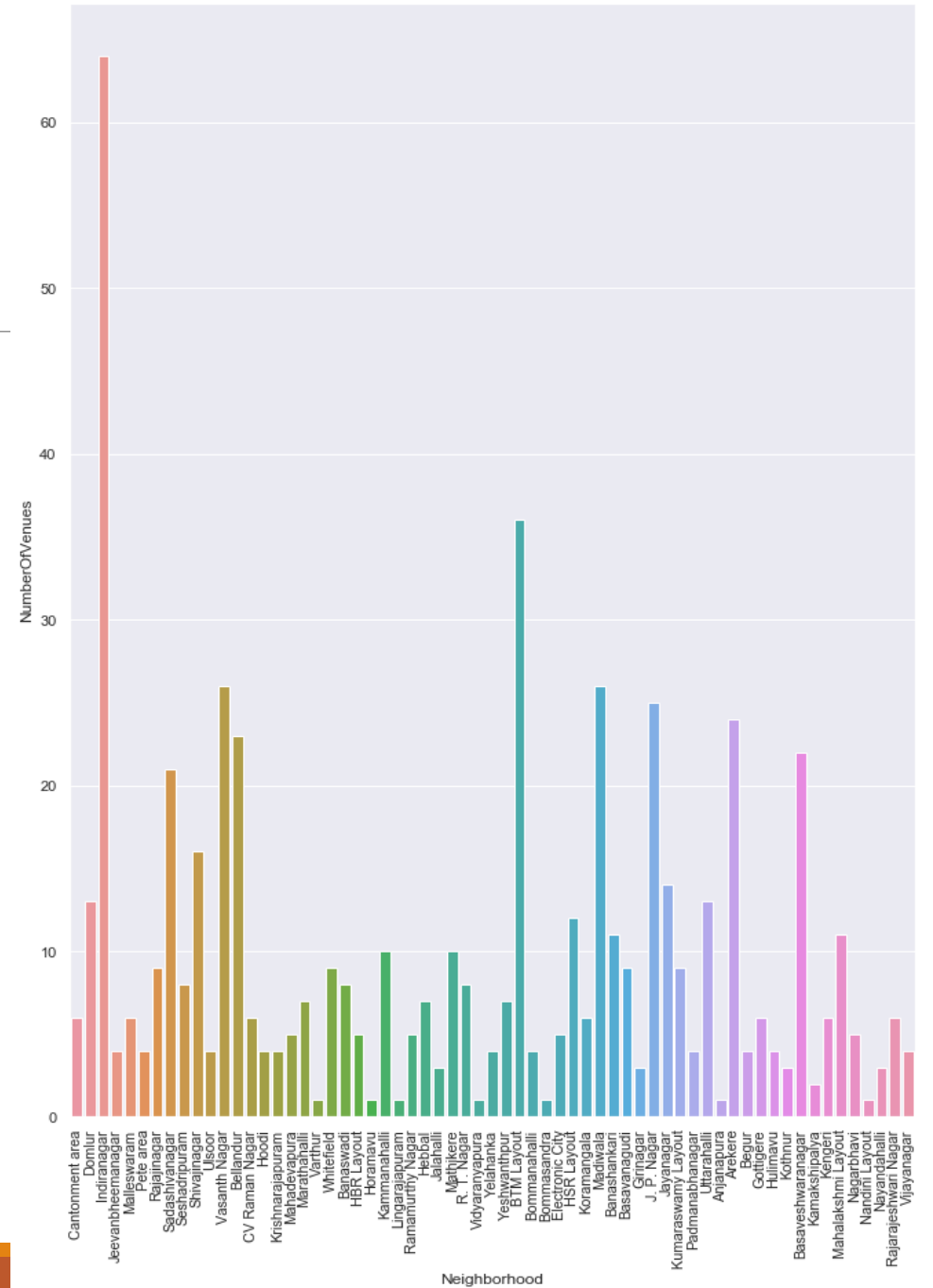
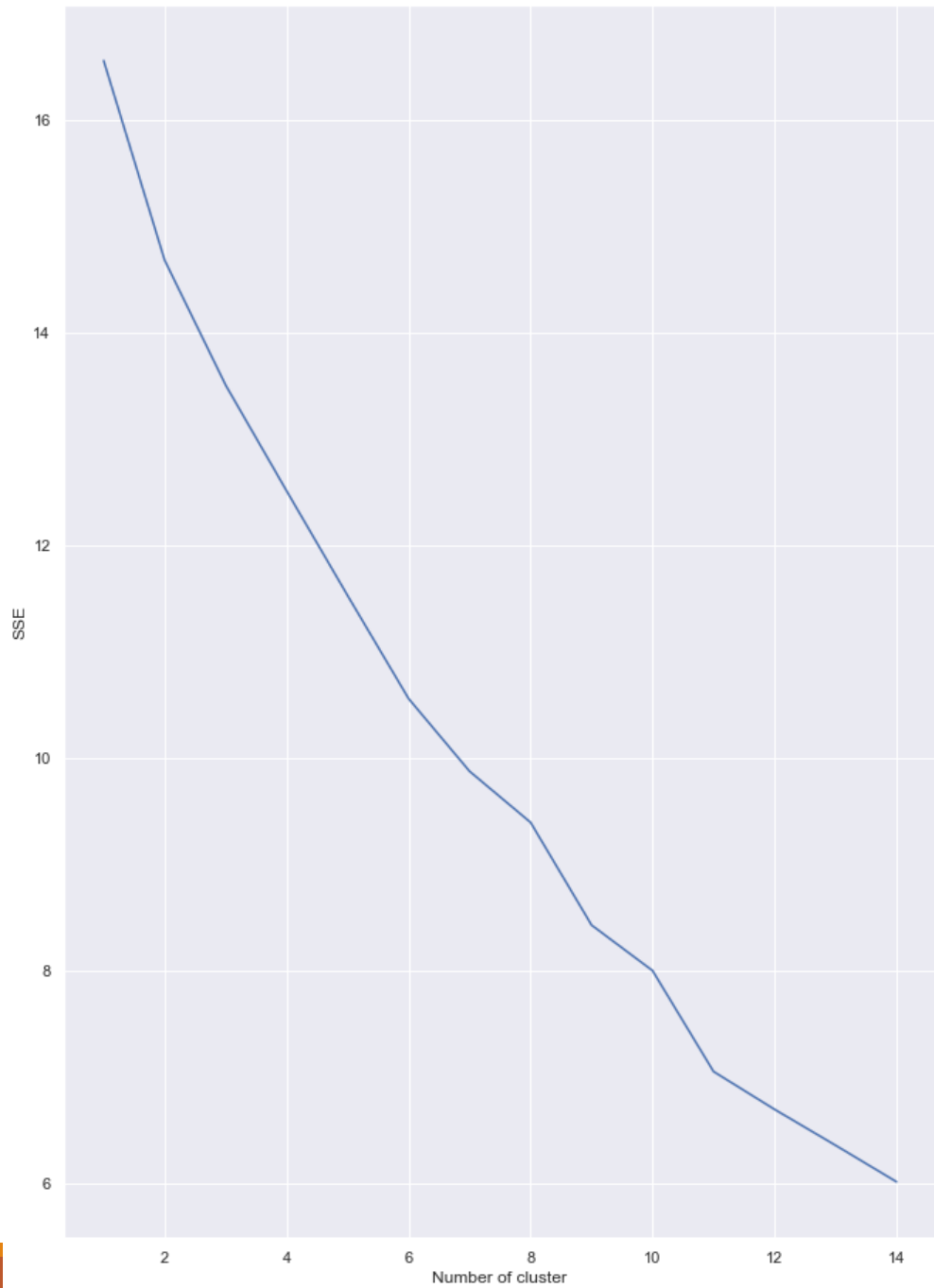
Restaurant Recommendation System

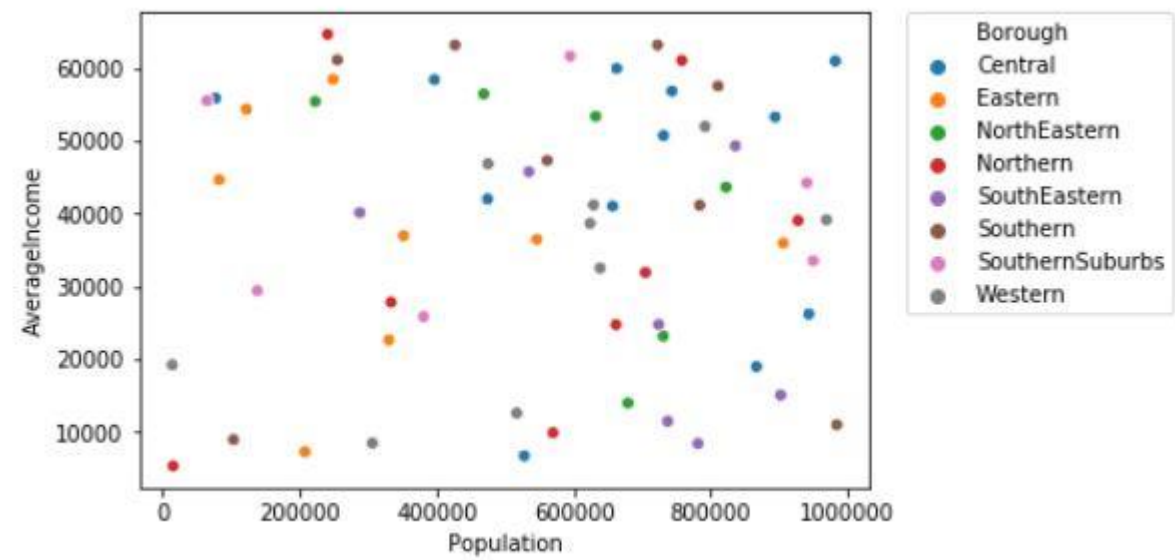
APPLIED DATA SCIENCE CAPSTONE PROJECT

UMANG DIGHE

Methodology







Datasets

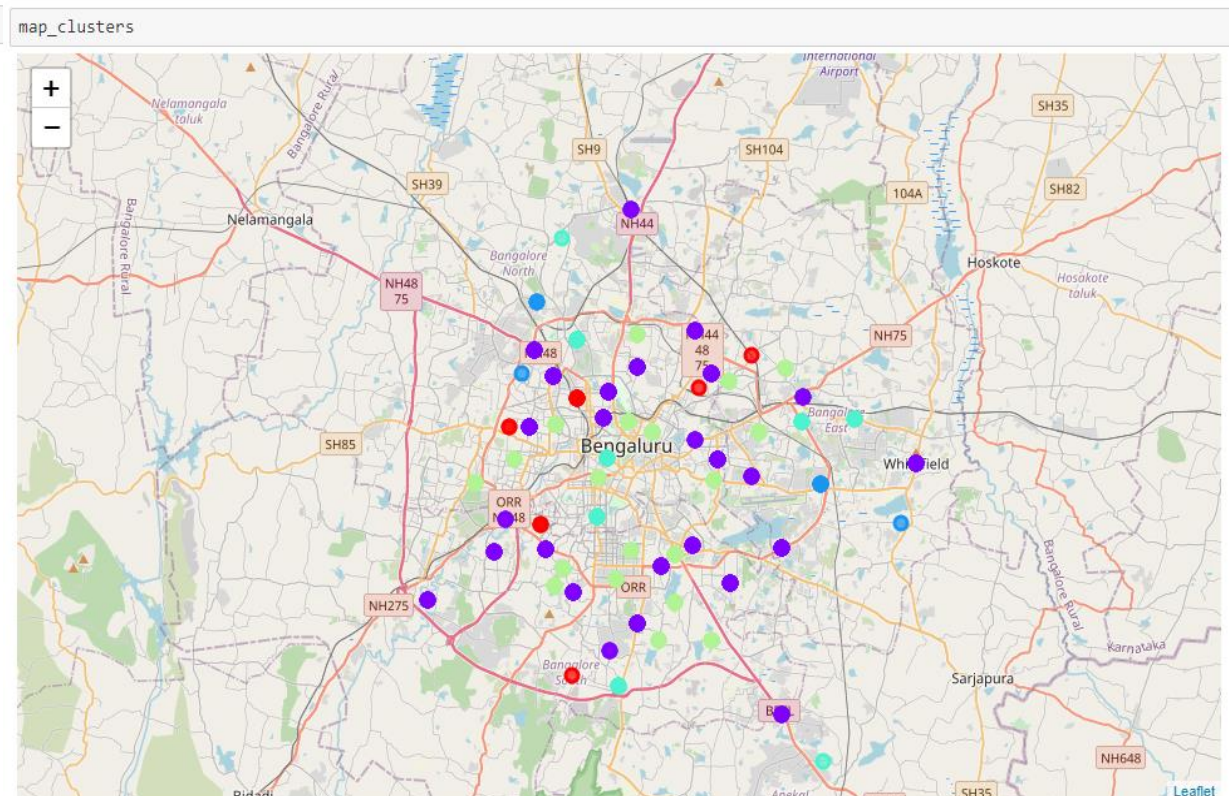
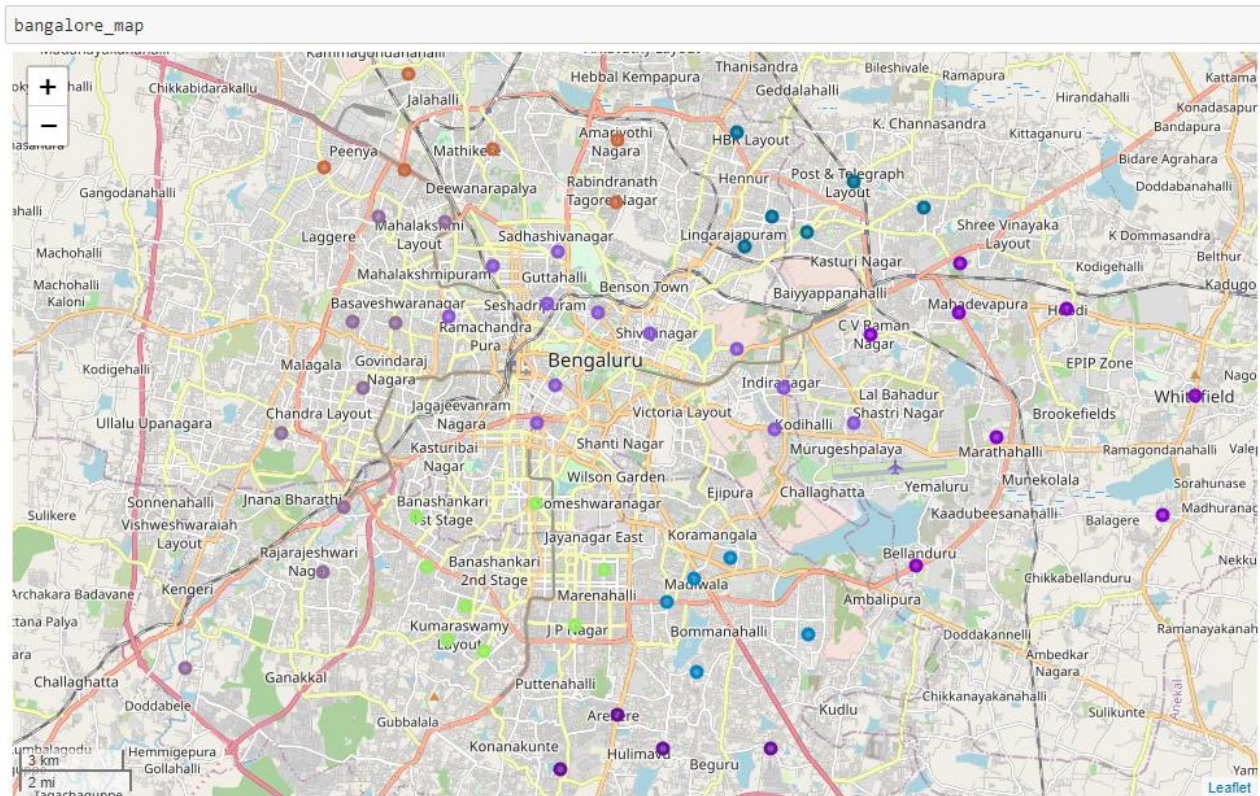
	Neighborhood	Borough	Neighborhood Latitude	Neighborhood Longitude	Venue	Venue Latitude	Venue Longitude	Venue Category
0	Cantonment area	Central	12.972442	77.580643	Hotel Fishland	12.975569	77.578592	Seafood Restaurant
1	Cantonment area	Central	12.972442	77.580643	Adigas Hotel	12.973554	77.579161	Restaurant
2	Cantonment area	Central	12.972442	77.580643	Sapna Book House	12.976355	77.578461	Bookstore
3	Cantonment area	Central	12.972442	77.580643	Vasudev Adigas	12.973707	77.579257	Indian Restaurant
4	Cantonment area	Central	12.972442	77.580643	Sree Vishnu Bhavan	12.973950	77.579038	Indian Restaurant

Borough	Neighborhoods	Latitude	Longitude
Central	Cantonment area	12.972442	77.580643
Central	Domlur	12.960992	77.638726
Central	Indiranagar	12.971891	77.641151
Central	Jeevanbheemanagar	12.962900	77.659500
Central	Malleswaram	13.003100	77.564300
Central	Pete area	12.962700	77.575800
Central	Rajajinagar	12.990100	77.552500
Central	Sadashivanagar	13.006800	77.581300
Central	Seshadripuram	12.993500	77.578700
Central	Shivajinagar	12.985700	77.605700

	Borough	Neighborhoods	AverageIncome	Normalized_income
0	Central	Cantonment area	18944.099792	0.293051
1	Central	Domlur	56837.022198	0.879225
2	Central	Indiranagar	41991.817435	0.649581
3	Central	Jeevanbheemanagar	6667.447632	0.103140
4	Central	Malleswaram	53270.063892	0.824047

	Borough	Neighborhoods	Population	Normalized_population
0	Central	Cantonment area	866377	0.880810
1	Central	Domlur	743186	0.755567
2	Central	Indiranagar	474289	0.482190
3	Central	Jeevanbheemanagar	527874	0.536668
4	Central	Malleswaram	893629	0.908516

Mapping and clustering



Results and conclusion

	Neighborhoods	1st Most Common Venue	2nd Most Common Venue	3rd Most Common Venue	Ranking
0	Arekere	Venue Category_Indian Restaurant	Venue Category_Sporting Goods Shop	Venue Category_Pizza Place	[0.32959888840700646]
1	BTM Layout	Venue Category_Indian Restaurant	Venue Category_Ice Cream Shop	Venue Category_Chinese Restaurant	[0.6918117751640322]
2	Banashankari	Venue Category_Café	Venue Category_Indian Restaurant	Venue Category_Miscellaneous Shop	[0.8234029969357849]

Based on the analysis above, the three neighborhoods of "Arekere", " BTM Layout", and "Banashankari" are the top 3 localities to find similar vegetarian food to the neighborhood of Whitefield.

----- Arekere -----

	Venue	Frequency
0	Venue Category_Indian Restaurant	0.17
1	Venue Category_Sporting Goods Shop	0.17
2	Venue Category_Pizza Place	0.08
3	Venue Category_Breakfast Spot	0.04
4	Venue Category_Department Store	0.04

----- BTM Layout -----

	Venue	Frequency
0	Venue Category_Indian Restaurant	0.19
1	Venue Category_Ice Cream Shop	0.08
2	Venue Category_Chinese Restaurant	0.08
3	Venue Category_Snack Place	0.08
4	Venue Category_Vegetarian / Vegan Restaurant	0.06

----- Banashankari -----

	Venue	Frequency
0	Venue Category_Café	0.18
1	Venue Category_Indian Restaurant	0.09
2	Venue Category_North Indian Restaurant	0.09
3	Venue Category_Pizza Place	0.09
4	Venue Category_Miscellaneous Shop	0.09

THANK YOU !

