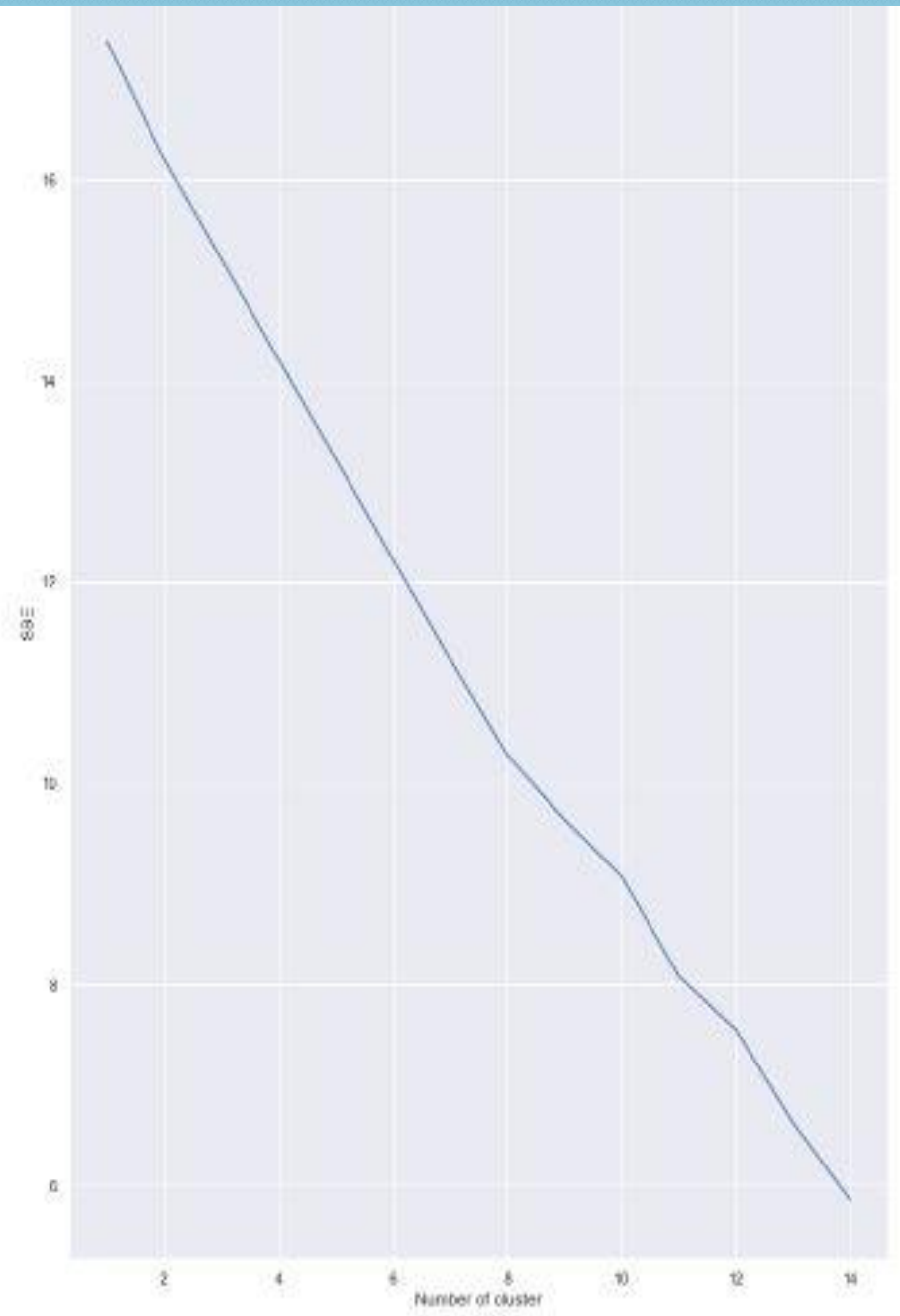
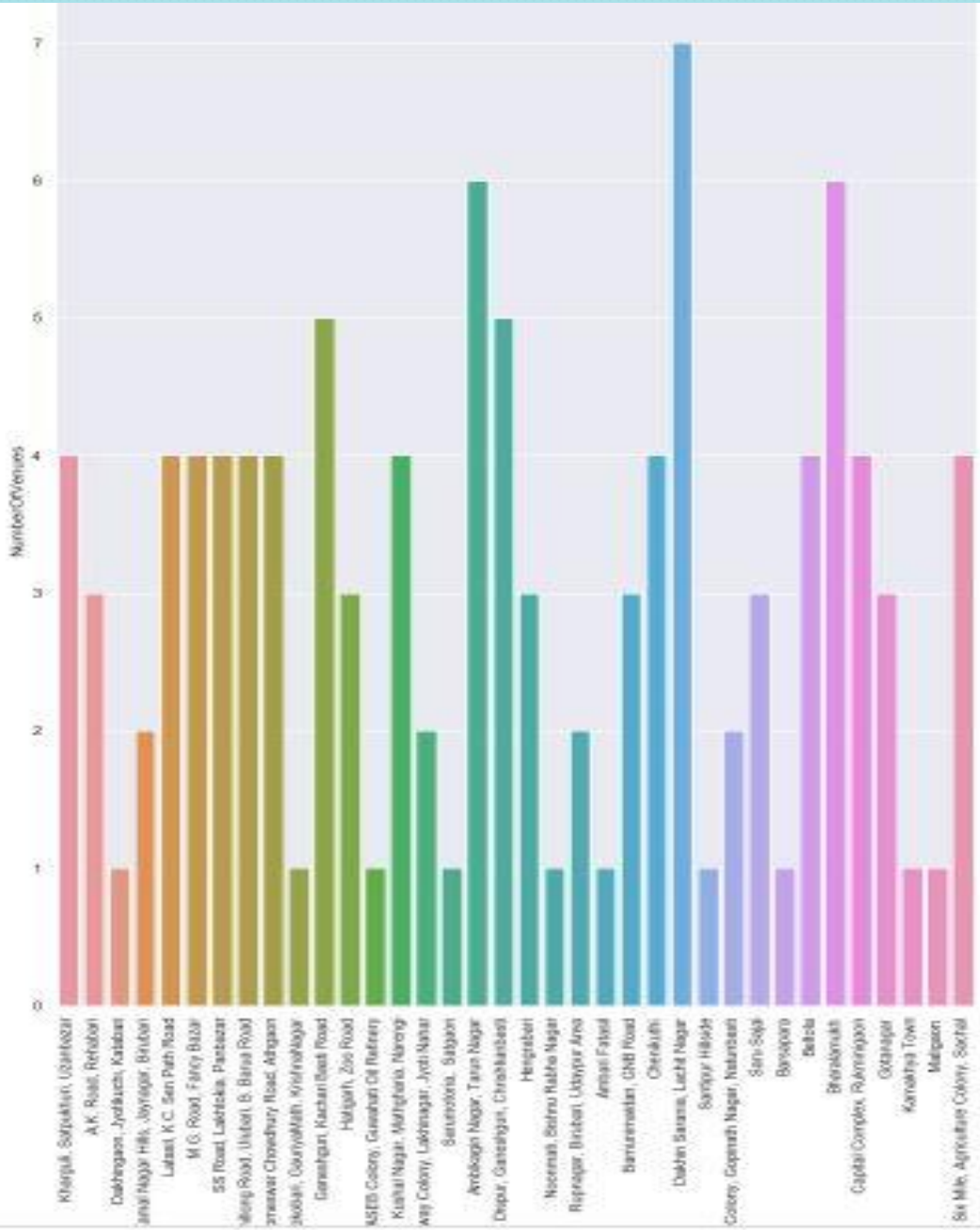
Restaurant recommender system

IBM Capstone project.

Methodology

- Machine Learning
- Explanatory Analysis
- Inferential Analysis


SSE
Number of cluster
0
8
10
12
14
16
2
4
6
8
10
12
14


NumberOfVenues
0
1
2
3
4
5
6
7
Khergul, Satpuktiun, Uzanbazar
A.K. Road, Rehabari
Dakhingaon, Jyotikuchi, Kalabari
Jamal Nagar Hills, Jaynagar, Biruban
Latasil, K.C. Sen Path Road
M.G. Road, Fancy Bazar
SS Road, Lakhtokia, Panbazar
Hilong Road, Uluhari, B. Barua Road
Ramanwar Chowdhury Road, Adhgaon
Jhobari, GouriyaMath, Krishnanagar
Ganeshgun, Kachari Basti Road
Hatigarh, Zoo Road
NSEB Colony, Guwahati Oil Refinery
Kushal Nagar, Mathgharia, Narengi
Way Colony, Lakhinagar, Jyoti Nahar
Sarunotoria, Satgaon
Ambikagiri Nagar, Tarun Nagar
Dispur, Ganeshgun, Chhatkanbasti
Hingrabari
Noonmati, Bishnu Rabha Nagar
Rupnagar, Biruban, Udaypur Area
Ambari Fatasil
Bamunimaidan, GNB Road
Chenikuthi
Dakhin Sarana, Lachit Nagar
Santipur Hillside
Colony, Gopinath Nagar, Nalunbasti
Saru Sajai
Bamsapara
Beltola
Bharalamukh
Capital Complex, Rukminigaon
Gotanagar
Kamakhya Town
Maligaon
Six Mile, Agriculture Colony, Sachal

Datasets

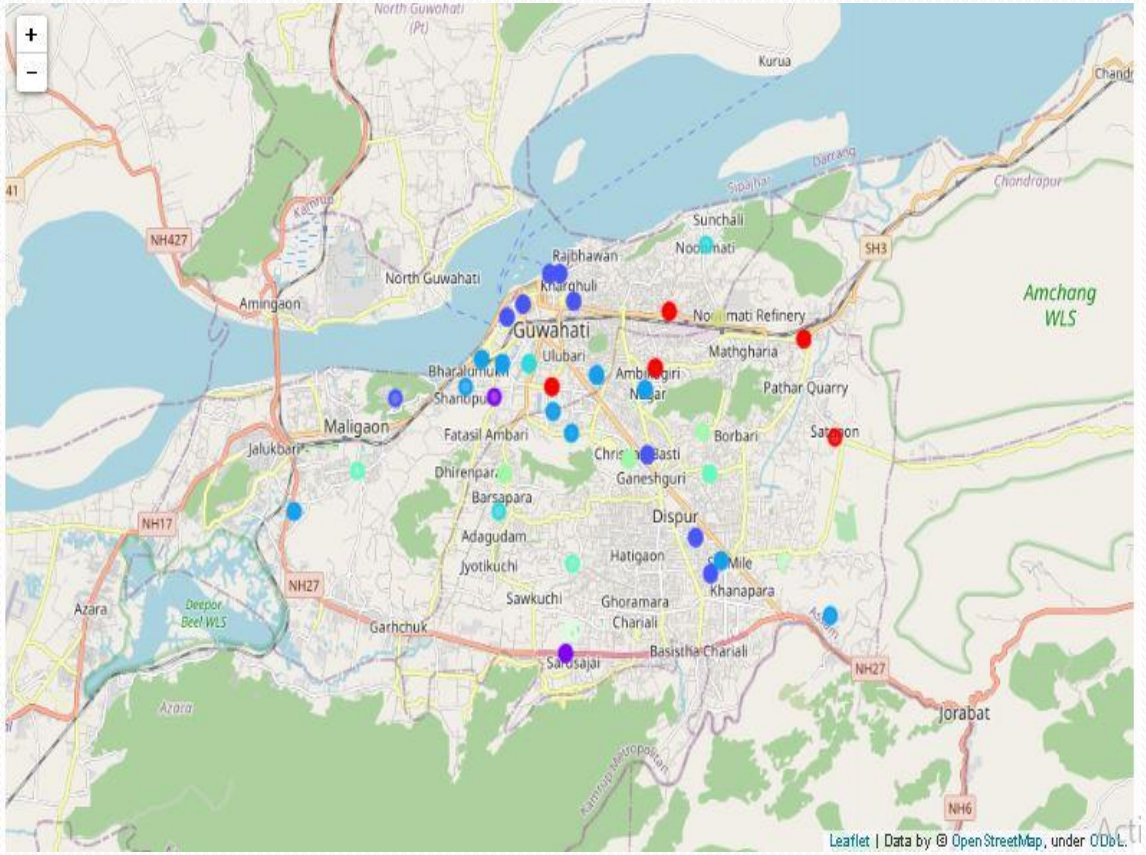
	Borough	Neighborhoods	AverageIncome
0	West	Jalukbari	26872
1	West	Ferryghat Colony	10123
2	West	Maligaon	32343
3	West	Adabari	29123
4	West	Kamakhya Town	30345

	Borough	Neighborhoods	Latitude	Longitude	Population	City	AverageIncome
0	West	Jalukbari	26.1426	91.6435	20555	Guwahati	26872
1	West	Ferryghat Colony	26.1859	91.7216	72045	Guwahati	10123
2	West	Maligaon	26.1504	91.6960	26456	Guwahati	32343
3	West	Adabari	26.1686	91.6779	21421	Guwahati	29123
4	West	Kamakhya Town	26.1659	91.7074	18623	Guwahati	30345

	Borough	Neighborhoods	Population
0	West	Jalukbari	20555
1	West	Ferryghat Colony	72045
2	West	Maligaon	26456
3	West	Adabari	21421
4	West	Kamakhya Town	18623

	Neighborhood	Borough	Neighborhood Latitude	Neighborhood Longitude	Venue	Venue Latitude	Venue Longitude	Venue Category
0	Maligaon	West	26.1504	91.6960	Goshala Bazaar Maligaon	26.150406	91.695621	Flea Market
1	Kamakhya Town	West	26.1659	91.7074	Kamakhya View Point	26.162372	91.705112	Scenic Lookout
2	Gotanagar	West	26.1420	91.6773	Radisson Blu	26.141747	91.673764	Hotel
3	Gotanagar	West	26.1420	91.6773	Hemalata Dhaba	26.140271	91.675350	Diner
4	Gotanagar	West	26.1420	91.6773	Cafe b you	26.141835	91.673881	Buffet

Mapping and clustering



Results and conclusion

```
--------- Barsapara ---------
                                  Venue  Frequency
0  Venue Category_Recreation Center        1.0
1                Venue Category_ATM        0.0
2           Venue Category_Pharmacy        0.0


--------- Beltola ---------
                                      Venue  Frequency
0                   Venue Category_Pizza Place       0.25
1  Venue Category_Northeast Indian Restaurant       0.25
2          Venue Category_Fast Food Restaurant       0.25


--------- Bharalamukh ---------
                            Venue  Frequency
0      Venue Category_Boutique       0.33
1     Venue Category_Hotel Bar       0.17
2  Venue Category_Snack Place       0.17
```

	Neighborhoods	1st Most Common Venue	2nd Most Common Venue	3rd Most Common Venue	Ranking
0	Bishnupur Colony, Gopinath Nagar, Natunbasti	Venue Category_Hotel	Venue Category_Clothing Store	Venue Category_Zoo	[0.3206676818096672]
1	Dispur, Ganeshguri, Chrishtianbasti	Venue Category_Clothing Store	Venue Category_Shopping Mall	Venue Category_Fast Food Restaurant	[0.3733661012747169]
2	Tokobari, GauriyaMath, KrishnaNagar	Venue Category_Clothing Store	Venue Category_Zoo	Venue Category_Diner	[0.24348350807199406]

Thank You!

KAMAL PANDEY