

Chennai Neighborhood Analysis

– Starting a restaurant

Planning to start a restaurant in Chennai

Factors generally people consider for starting a restaurant in terms of location and type:

- Locality/neighborhood
- Nearby venues of the restaurant location
- If that location is already filled with restaurants
- Type of restaurant/cuisine
- Nearby venue footfalls

Data Collection

List of neighborhoods of Chennai – Wikipedia

Data Scrapping:

The above Wikipedia page gives a list of:

- **Locality/neighborhood** in Chennai
- Division of these localities into **8 locations(boroughs)**
- Latitude/Longitude **coordinates** of these localities
- **176 such areas/neighborhoods** were obtained

	Area	Location	Latitude	Longitude
0	Adambakkam	South and East Chennai	12.9880	80.2047
1	Adyar	South and East Chennai	13.0012	80.2565
2	Alandur	South and East Chennai	12.9975	80.2006
3	Alapakkam	West Chennai	13.0490	80.1673
4	Alwarthirunagar	West Chennai	13.0426	80.1840

Methodology

Foursquare API obtains around **870 venues and Venue Categories** for 176 neighborhoods

	Neighborhood	Neighborhood Latitude	Neighborhood Longitude	Venue	Venue Latitude	Venue Longitude	Venue Category
0	Adambakkam	12.9880	80.2047	Venkateshwara Super Market	12.986320	80.205168	Department Store
1	Adambakkam	12.9880	80.2047	Ibaco	12.988729	80.205646	Dessert Shop
2	Adambakkam	12.9880	80.2047	Deepam Restaurant	12.985380	80.205281	Indian Restaurant
3	Adambakkam	12.9880	80.2047	ibaco Adambakkam	12.987358	80.200504	Ice Cream Shop
4	Adyar	13.0012	80.2565	Zha Cafe	12.999730	80.254806	Café

Methodology

One hot coding and returning 10 most common venues:

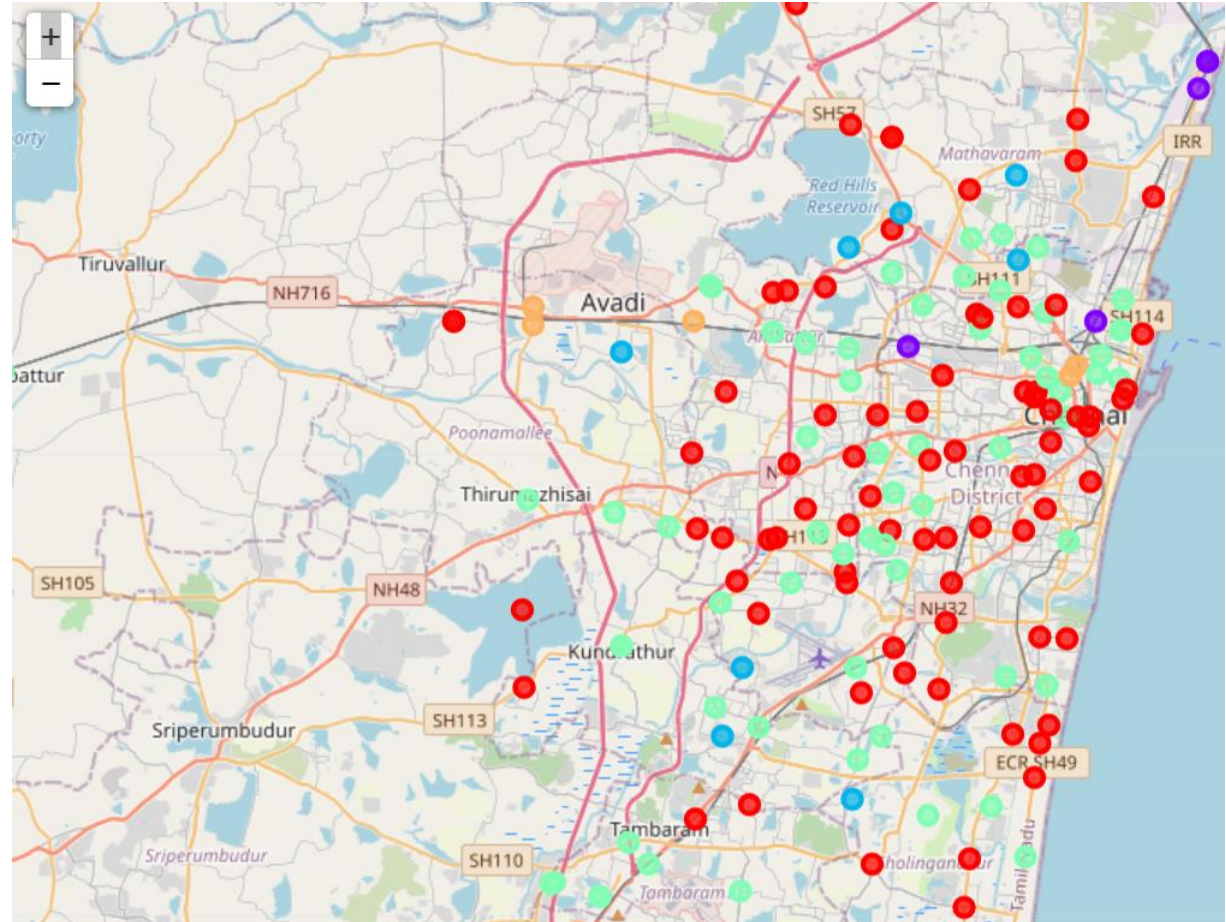
	Neighborhood	1st Most Common Venue	2nd Most Common Venue	3rd Most Common Venue	4th Most Common Venue	5th Most Common Venue	6th Most Common Venue	7th Most Common Venue	8th Most Common Venue	9th Most Common Venue	10th Most Common Venue
0	Adambakkam	Ice Cream Shop	Indian Restaurant	Department Store	Dessert Shop	Farm	Flower Shop	Flea Market	Fishing Store	Fish Market	Fast Food Restaurant
1	Adyar	Indian Restaurant	Pizza Place	Café	Electronics Store	Asian Restaurant	Food Court	Sandwich Place	Fast Food Restaurant	Middle Eastern Restaurant	Department Store
2	Alandur	Indian Restaurant	Train Station	Metro Station	Breakfast Spot	Women's Store	Event Space	Flea Market	Fishing Store	Fish Market	Fast Food Restaurant
3	Alapakkam	Fast Food Restaurant	Indian Restaurant	Women's Store	Event Space	Flower Shop	Flea Market	Fishing Store	Fish Market	Farmers Market	Farm
4	Alwarthirunagar	Fast Food Restaurant	Clothing Store	Ice Cream Shop	Café	Indian Restaurant	Gym	Juice Bar	Pizza Place	Vegetarian / Vegan Restaurant	Art Museum

Methodology

K-means clustering :

- **5 clusters**
- Neighborhoods divided across clusters
- Applying **Folium** visualization on
- these clusters
- Further analysis revealed that the venues are concentrated majorly in **cluster 0 and 3**:

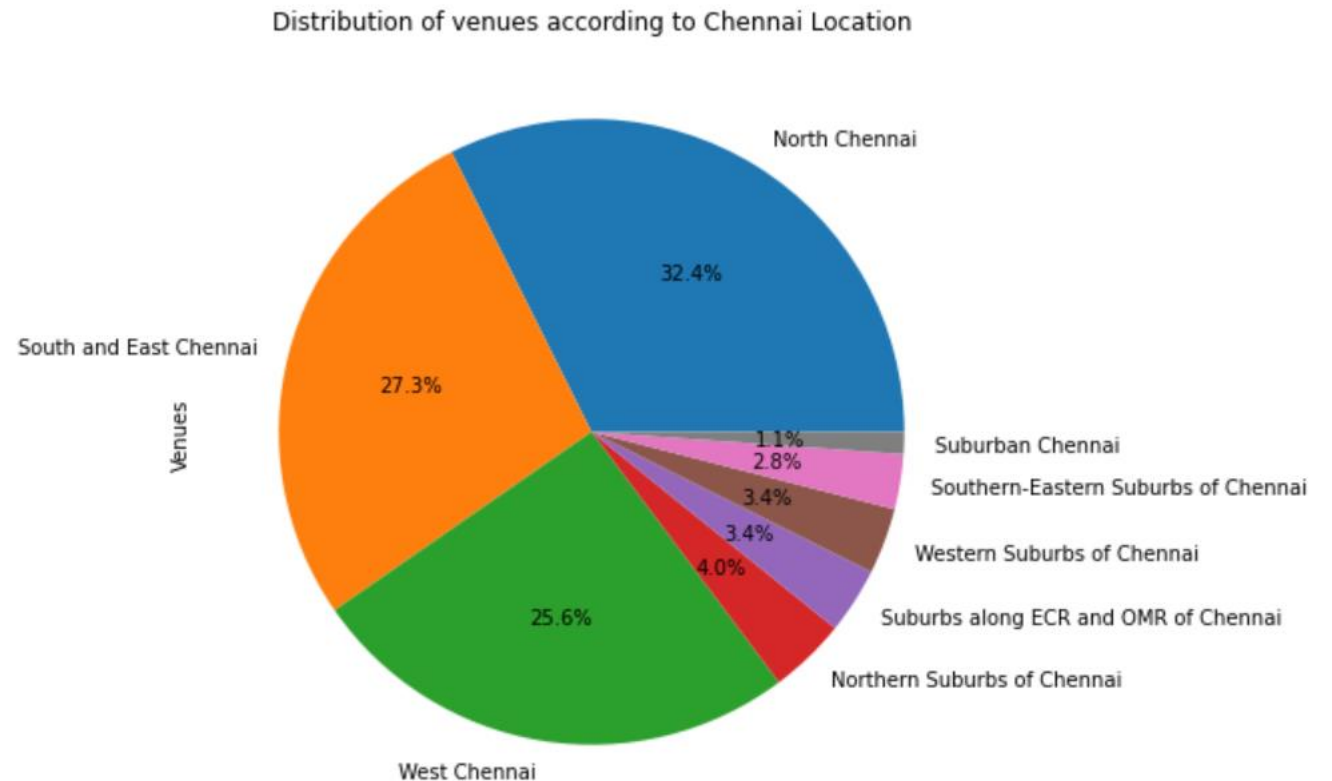
	Neighborhoods
Cluster Labels	
0	85
3	71
2	8
4	7
1	5



Observation & Analysis

	Venues
Location	
North Chennai	57
South and East Chennai	48
West Chennai	45
Northern Suburbs of Chennai	7
Suburbs along ECR and OMR of Chennai	6
Western Suburbs of Chennai	6
Southern-Eastern Suburbs of Chennai	5
Suburban Chennai	2

Further dividing Neighborhoods on different zones, reveals an interesting fact that **North Chennai** has most of the Venues captured by Foursquare API, followed by **West Chennai**



Observation & Analysis

Top 10 Neighborhoods with most venue categories:

	Neighborhood	Total venues
0	T. Nagar	30
1	Gopalapuram	30
2	Anna Nagar	30
3	Kelambakkam	30
4	Vadapalani	28
5	Thousand Lights	26
6	Basant Nagar	21
7	Broadway	21
8	Guindy	16
9	Kancheepuram	15

Top 10 Venue Categories in Chennai:

	Venue Category	Count
0	Indian Restaurant	115
1	Fast Food Restaurant	36
2	Hotel	30
3	Café	29
4	Pizza Place	28
5	Vegetarian / Vegan Restaurant	28
6	Department Store	27
7	Train Station	25
8	Bakery	22
9	Clothing Store	22

Top 10 Venues in Chennai:

	Venue	Count
0	Domino's Pizza	20
1	Cafe Coffee Day	12
2	Hotel Saravana Bhavan	12
3	Subway	11
4	KFC	9
5	Axis Bank ATM	7
6	Starbucks	6
7	HDFC Bank ATM	5
8	Ibaco	5
9	Reliance Fresh	5

With the data gathered, we could find the Top10 sections of:

- Total venues
- Venues Categories
- Neighborhoods with most venue Categories

Conclusion

Inferences observed from data gathered which could be used as critical inputs for starting a restaurant are:

Location:

- Neighborhoods in Cluster 1,2 and 4 might be good to start a hotel/restaurant as the density of such venue categories is much less compared to other clusters

Cuisine:

- Indian Restaurants are the most in terms of category. Hence, starting other cuisines could gather most customer footfalls

Nearby Venues:

- Opening restaurants near Train stations (25 in count) and clothing store (22 in count) would attract customers to restaurants who come to these areas.