

Housing Recommendation in Bangalore based on Food category

Using K-Means Clustering Algorithm

Anirudh VS

INTRODUCTION

- **Bangalore**, the capital city of south Indian state of Karnataka. Also known as **the Silicon Valley of India**, has an estimated population of 12.34 million in the metro area.
- Development and Job opportunities leading to Traffic and pollution.
- People prefer housing near to their worklocation.
- Problem in getting food of their choice

DATA USED

- Bangalore Neighborhood data is mined from All India Pincode directory data which is available in <https://data.gov.in>.
- The Bangalore Neighborhood data can be downloaded from here https://github.com/anirudhupadya/Housing-Recommendation-in-Bangalore-based-on-Food-Choice/blob/master/Bangalore_Neighbourhoods.csv
- Used Foursquare API to get the data related to food and its category

METHODOLOGY

- We are focusing only on Indian Restaurants which are available within 500m radius from each Neighborhoods
- We will use K-Means clustering algorithm for clustering the venues based on the frequency of restaurants in the neighborhoods
- Based on the cluster size and number of restaurants in them, we will select the top three clusters with the neighborhoods
- The Neighborhoods will be the recommended locations

RESULTS

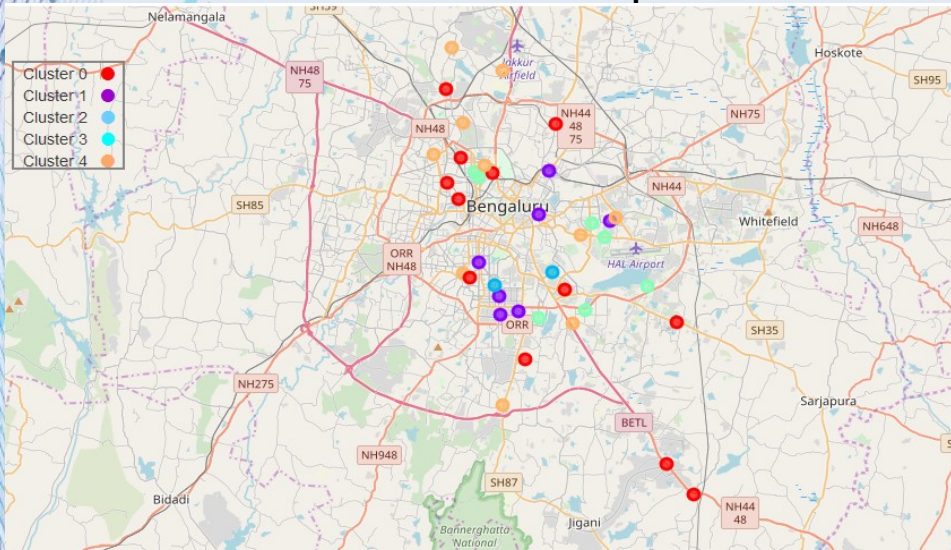
- With K=5 for K-mean clustering algorithm we got the following results in each cluster,

Cluster 0: 12 Restaurants
Cluster 1: 7 Restaurants
Cluster 2: 2 Restaurants
Cluster 3: 7 Restaurants
Cluster 4: 10 Restaurants

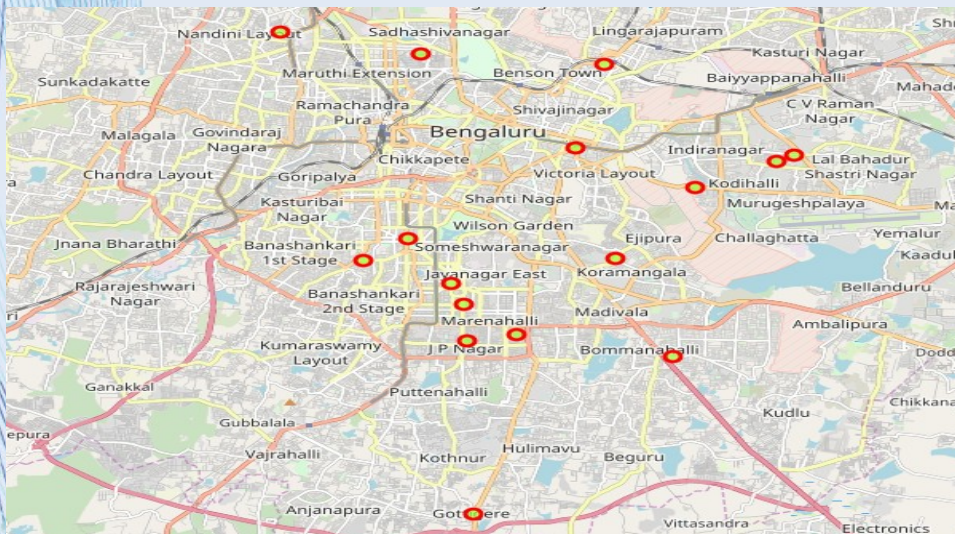
Indian Restaurant	
Cluster ID	
0	12
1	56
2	35
3	30
4	24

RESULTS(continued)

- Clusters Distribution on the map



- Recommended neighborhoods on the map



CONCLUSION

- The Result looks promising for finding locations based on the food category, and can be generalized for other categories as well.
- The recommendations can be further improved with combining this data with other datasets like house prices etc. ,to draw further insights in the location and recommend optimized location for housing.