Opening a new mall in the city of Bangalore

By Shoban Dinesh

Introduction

- Location of a mall is one of the key factors that determined it success.
- Objective: the analyse the locations of the neighbourhoods of the city of Bangalore and recommend a set of locations which can consider to open a new mall.
- This project tries to answer the question: ‘which neighbourhoods should be considered by a property developer to open a new mall?’

Data

- Data that were required:

1. List of neighbourhoods in the city of Bangalore.
2. Latitude and longitudes of individual neighbourhoods.
3. Venue data of the neighbourhood, particularly the shopping mall details.

- Sources:

1. Wikipedia page of the list of all neighbourhoods of Bangalore.
2. Geocoder library for latitude and longitudes.
3. Foursquare API for venue data.

Methodology

- Web scraping: to extract data from the Wikipedia page.
- Get Latitude and Longitudes using the Geocoder library.
- Use Foursquare API to get venue data.
- Group the data based on the mean of frequency of occurrence of each of the category.
- Filter the venue data by Shopping mall.
- Performing K-Means Clustering.
- Visualize these clusters in the map using Folium Library.

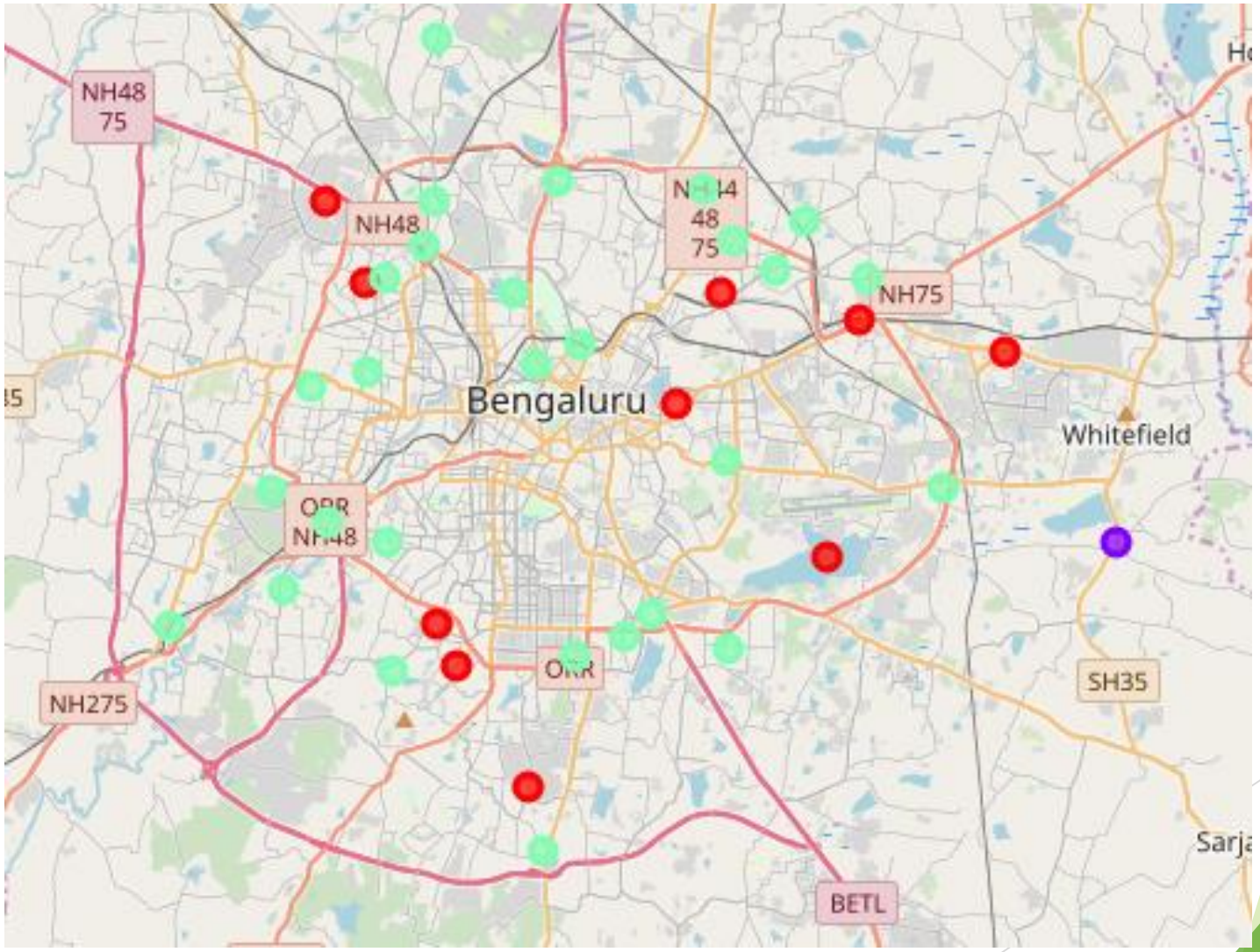
Results

K-Means clustering algorithm categorized the neighbourhoods into 3 categories based on the frequency of occurrence:

- Cluster 0: with high concentration of malls in the neighbourhood
- Cluster 1: with moderate concentration
- Cluster 2: with the lowest concentration.

Cluster 2 represents in the map in mint green colour, Cluster 1 in blue, Cluster 0 in red.

Results



Discussion

- A property developer looking at the result would like to consider the places with low concentration of malls as these places will have low competition.
- The red points with high concentration of malls would be already have high competition.
- The property developer with a unique selling point can consider the neighbourhood in mint green colour.

Conclusion

- The project recommends neighbourhoods based on the frequency of occurrence, it helps the stakeholder visualize the geographical locations of these neighbourhood.
- The selection of place depends on the calibre of the project in consideration, this project gives insights to the stakeholder about the concentration of malls already existing in the neighbourhoods of Banglore.

Thank You!