
Neighbourhood of Vancouver

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Business problem

Vancouver has a food culture which includes an array of international cuisines influenced by the city's immigrant history.

There are various types of restaurants but it's tough to determine which place is suitable for which cuisines as it varies by area. So we would like to find out the popular category of business in a particular area.

Data

For the project we required various types of data which were not available in ready to use form. So we need to use web mining, API, and libraries.

We need the data about restaurants in various areas of Vancouver, so we would need names of areas of Vancouver, coordinates of those areas and the data about restaurants in those areas.

Data Source

Names of Area: The names of area are fetched from the wikipedia page of postal codes : https://en.wikipedia.org/wiki/List_of_postal_codes_of_Canada:_V

Coordinates of Area: To get the latitude and longitude of the area we used python library 'geopy'.

Data on Restaurants: We use Foursquare api to fetch data regarding restaurants in a particular area.

Methodology

We use clustering algorithm to cluster the area having same or similar distribution of restaurants.

For that we use kMeans clustering algorithm for that we transform the data using one hot encoding as the data was categorical and was not compatible with the algorithm.

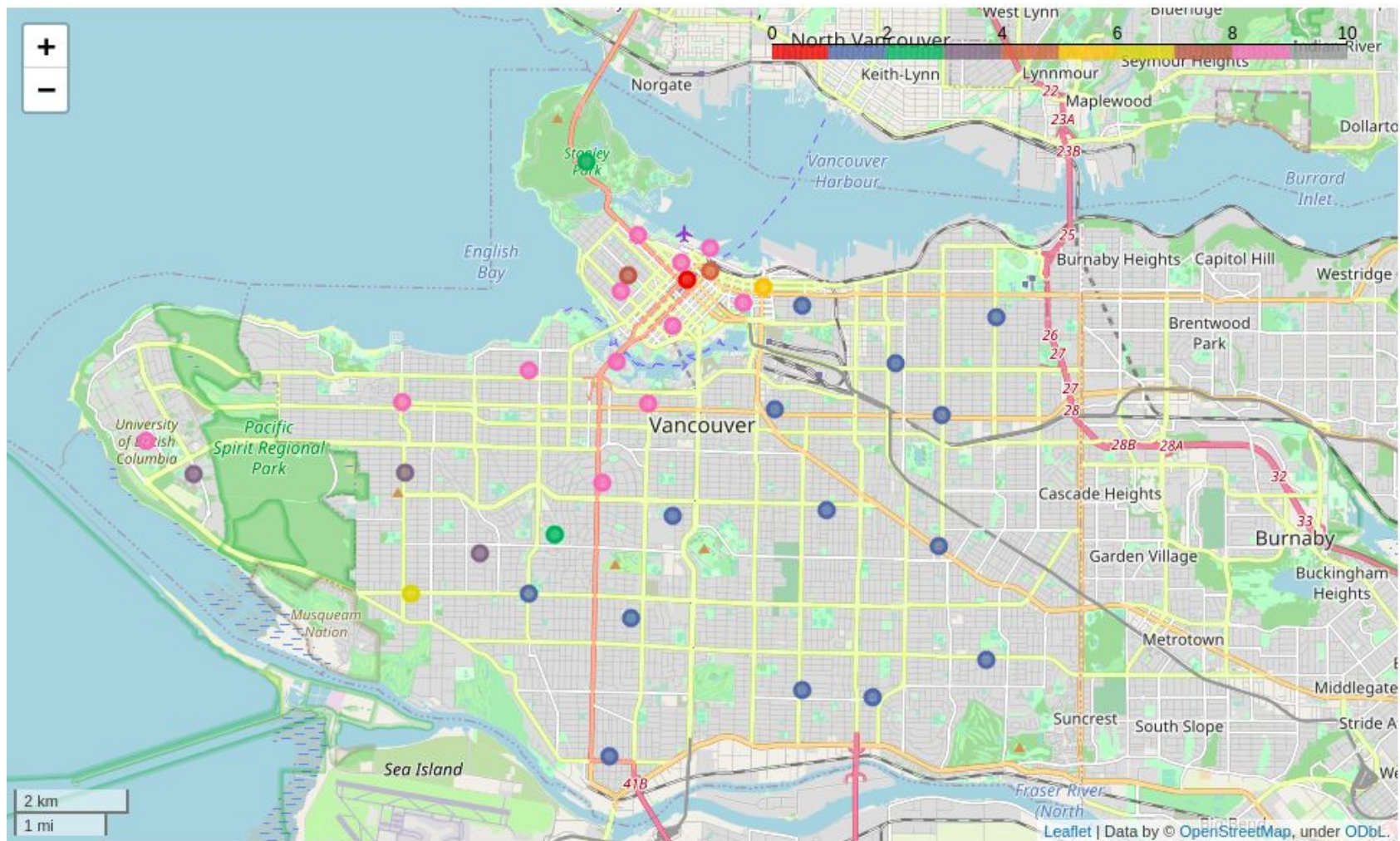
Result

After trying out various values for k in K-Means Clustering we found the best possible value for k i.e 9. Which result in 3 major clusters.

Cluster 2:- Vietnamese, Chinese, Japanese, Sushi, Indian Restaurants

Cluster 3:- Fast Food Restaurant

Cluster 9:- Japanese, Simple, Sushi, Seafood, Vegetarian / Vegan Restaurants



Conclusion

From the data now we can choose which type of restaurant to open in a particular area. We also found out that the asian cuisines like Chinese and Japanese are very popular among the people of Vancouver city.