Capstone Project - Battle of Neighborhood

Analysis and Clustering of Indian Restaurants in the neighborhood of Boston, MA, USA

Nithin K Mohan - August 18, 2020

Business Problem

- Identify a good location to open an Indian restaurant in the neighborhood of Boston, Massachusetts, USA

- Consider factors like existing concentration of restaurants and the population distribution of Asian-Indians in the neighborhood of Boston
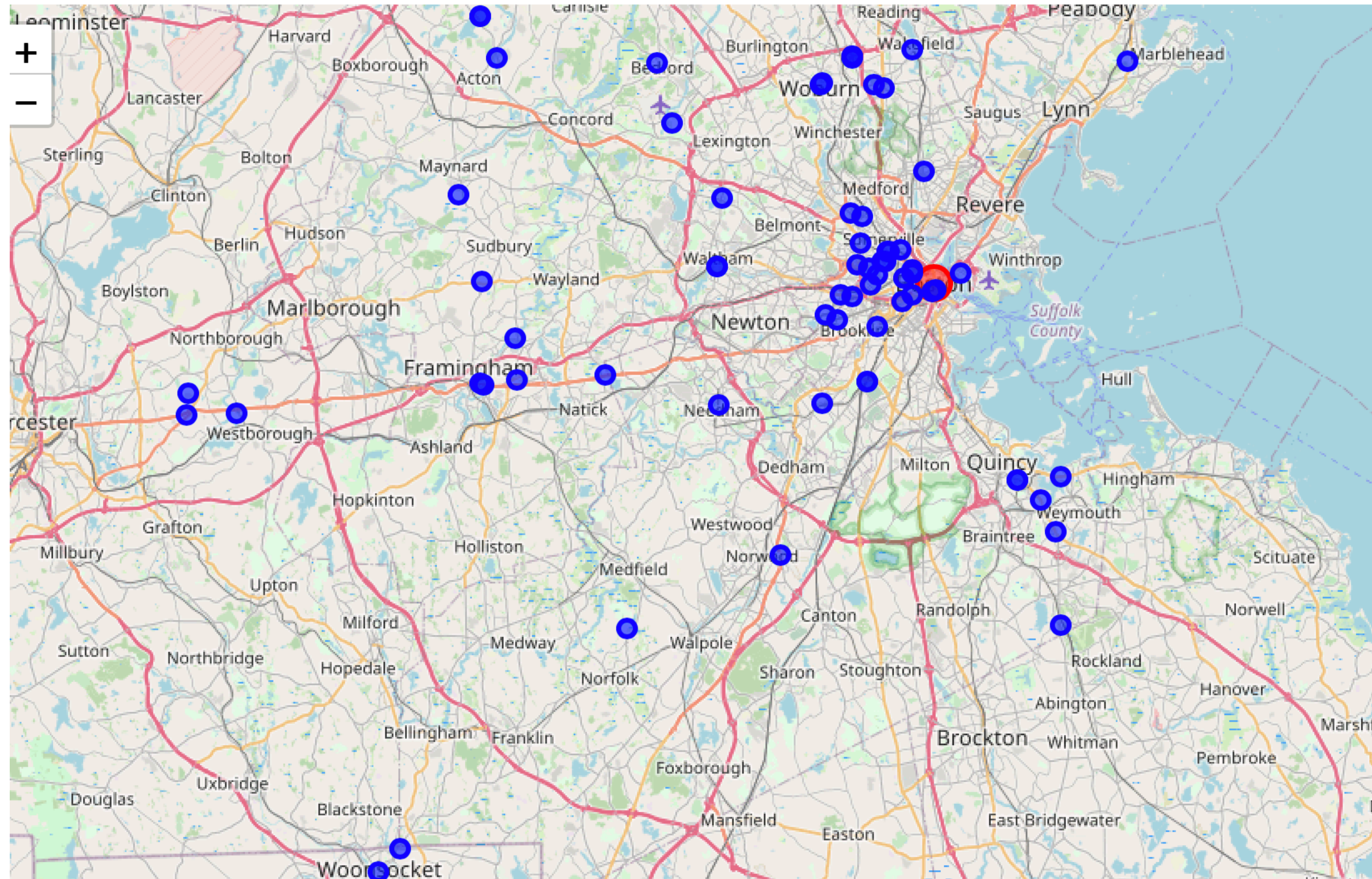
Data

- Locations details of current restaurants using Foursquare API Get Venue/Search endpoint call.

- Geopy Nominatum to retrieve the geo coordinates of Boston, Framingham and Braintree.

- Additional locations used for the Foursquare API call since the output is limited to 50 results.

Note:Population distribution data unavailable, hence not used.
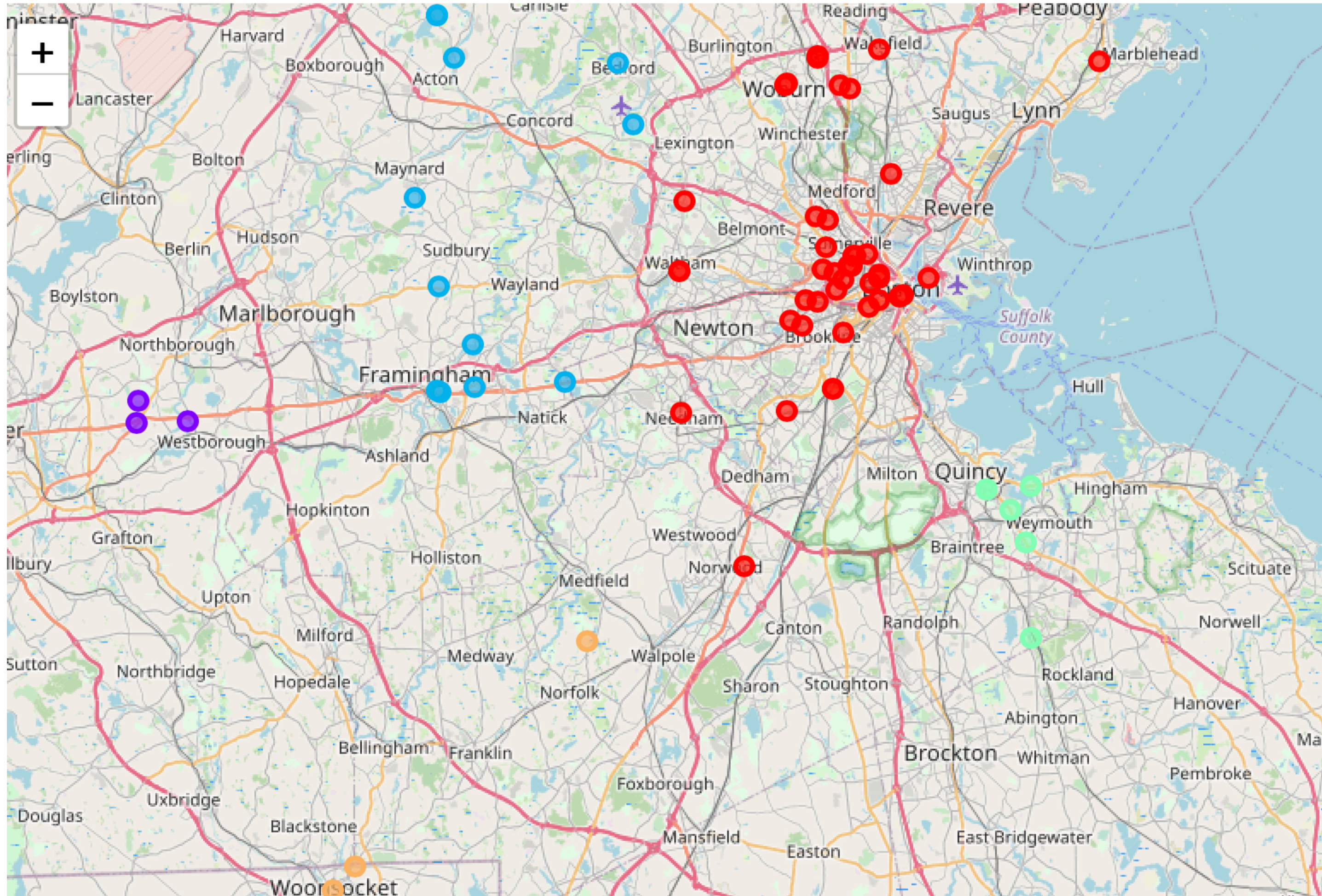
Exploratory Data analysis

Plotting restaurants on map (67 restaurants identified)

K-Means Clustering ML Algorithm

K-Means Clusters

Result & Discussion

- Norwood-Sharon-Walpole belt has fewer Indian restaurants

- Framingham-Westborough clusters can be clubbed together and has good concentration of Indian restaurants

- Boston metropolitan area seems to be a hot place for an Indian restaurant, but COVID19 impacts to restaurant business are higher due to employees and students in Boston city area being remote

Conclusion

- Norwood-Sharon-Walpole belt seem to be the ideal choice.

- Sharon or Walpole preferred since there are lesser concentration of Indian restaurants, but is large cluster of Asian-Indian population.