



IBM APPLIED DATA SCIENCE CAPSTONE PROJECT

Opening an Asian Restaurant in Amsterdam

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Business Problem

- 1.53 million visitors from Asia are expected to visit the Netherlands in 2020¹
- Bulk of travelers are from China, India and Japan
- These travelers may look for home comfort along their travel
- Amsterdam has a relatively established Asian food scene,² but it is unclear for a prospective restaurateur the best type of cuisine (Chinese, Indian or Japanese) and location to open an Asian restaurant

1. Forecasted inbound tourism from Asia to the Netherlands in 2020, by country. *Statista*. Retrieved from: <https://www.statista.com/statistics/799554/forecasted-inbound-tourism-from-asia-to-the-netherlands-by-country/>

2. Felding, S. (2019, February 15). Exploring Amsterdam's Superb Asian Restaurant Scene. *Dorsia*. Retrieved from: <https://www.dorsia.io/cities/amsterdam/guides/best-asian-food-amsterdam>

Data

- Data required
 - *List of neighbourhood in Amsterdam*
 - *Latitude and longitude of the neighbourhoods*
 - *Venue data relating to the location of Chinese, Indian and Japanese restaurants*
- Source of Data
 - *Amsterdam neighbourhood data with geographical coordinates from Kaggle³*
 - *Venue data extracted from Foursquare API*

3. Amsterdam Neighbourhood and Venues. Kaggle. Retrieved from:

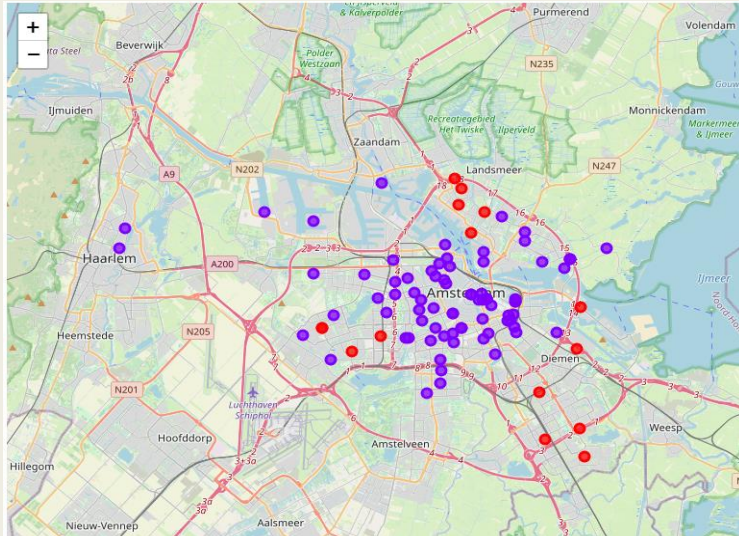
<https://www.kaggle.com/dushyantsapre/amsterdam-neighbourhood-and-venues>

Methodology

- Retrieving of Amsterdam neighbourhood dataset from Kaggle
- Get venue data using Foursquare API
- Filter venue data by Chinese, Indian and Japanese restaurant category
- Perform cluster analysis of the concentration and location of Chinese, Indian and Japanese restaurants in Amsterdam
- Visualize result of cluster analysis using Folium

Results

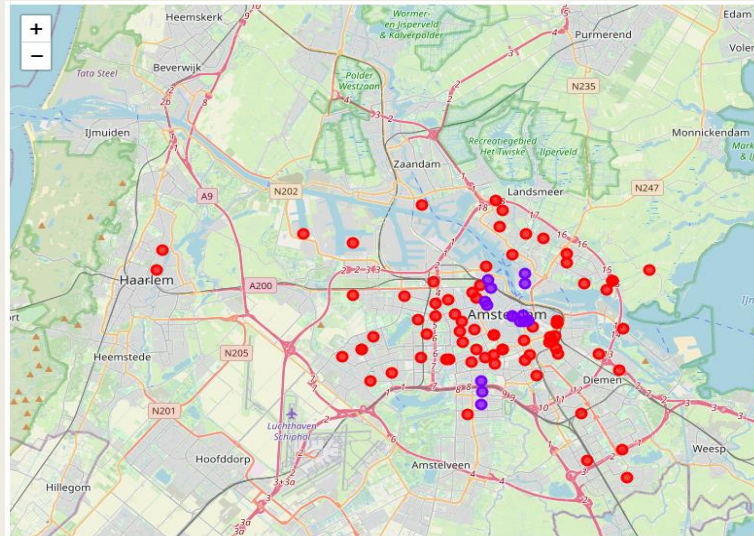
Chinese Restaurants



Cluster 1 (Red) –
Concentration of Chinese
restaurants

Cluster 2 (Purple) – No
Chinese restaurants

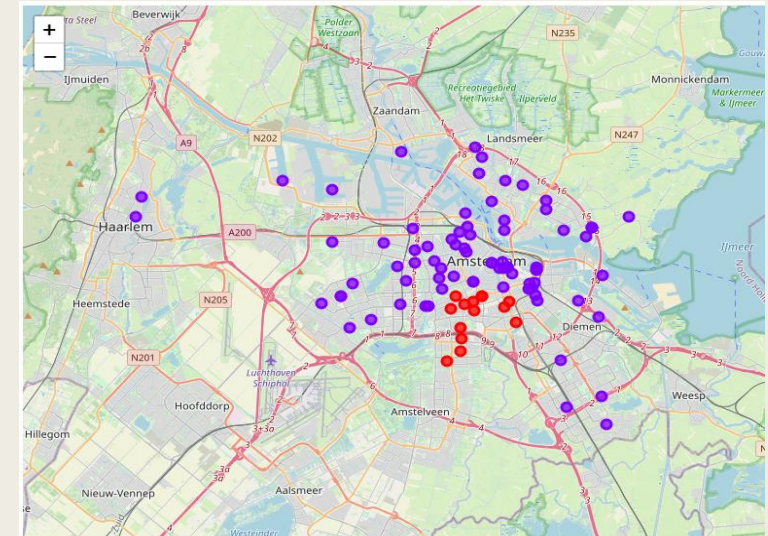
Indian Restaurants



Cluster 1 (Red) – No Indian
restaurants

Cluster 2 (Purple) –
Concentration of Indian
restaurants

Japanese Restaurants



Cluster 1 (Red) –
Concentration of Japanese
restaurants

Cluster 2 (Purple) – No
Japanese restaurants

Discussion

- There is a difference in the concentration of Chinese, Indian and Japanese restaurants in Amsterdam
- Chinese restaurants are dispersed further away from the city centre. There are virtually no Chinese restaurants in the city centre
- The reverse is true for Indian restaurants where there are representations in the city centre but not in neighbourhoods further away from the city centre
- Finally, Japanese restaurants are concentrated in the southwest of Amsterdam.

Recommendation

- There could be an opportunity to explore the opening of Chinese restaurants in the city centre
- On the other hand, since Indian restaurants are somewhat well-represented in the city centre, one may explore opening in neighbourhoods further away from the city centre
- As for Japanese restaurants, there could be an opportunity to open in a location away from the southwest to avoid competition

Conclusion

- The Amsterdam neighbourhood dataset was used together with venue data extracted using Foursquare API to reveal insights about the concentration and location of Chinese, Indian and Japanese restaurants in Amsterdam
- It was determined that Chinese restaurants are more concentrated away from the city centre while Indian restaurants are concentrated within the centre
- Japanese restaurants are found mainly in the Southwest of Amsterdam
- This location analysis may help the prospective restaurateur to decide the location and type of Asian cuisine to open purely from a location standpoint