



Amsterdam best Restaurant location

Amsterdam is the commercial capital of the Netherlands and one of the top financial centers in Europe. Many International Corporates have established their European headquarters in Amsterdam.

Amsterdam city metropolitan area has been selected due to its unique position as the official capital city of The Netherlands, the vibrant city life, multinational demographics, and as well a very popular destination for tourists. Amsterdam metropolitan area has excellent public transport infrastructure, including its famous cycling paths. The city has a large variety of museums, clubs, natural, and sports centers, public markets and coffee-shops / restaurants.



Problem

Analytical company has to make an analytical project that will support decision making for the new restaurant location, considering the viable options discovered, and based on specific data and criteria discussed below.

The new restaurant is planned to be of a new concept of high-quality top international cuisine that is expected to compete well within the large diversity of restaurants. However, the exact restaurant type might change, after the full analysis provides more insights based on location, demographics and spending power. The main problem to be resolved is to find the optimal location in Amsterdam city and surroundings that would allow the business to be quickly deployed – the untapped locations.



Solution

- We will use information from open public data available from Wikipedia on Amsterdam and its Boroughs, Open-Data portal of the city, and European Data Portal.
- We use Python libraries to clean, filter, visualize, analyze and cluster the information.
- We will perform K-Means clustering on the main data set and visualize information using Folium library.

End-to-End Process

Data acquisition

Acquiring and aggregating data from open sources

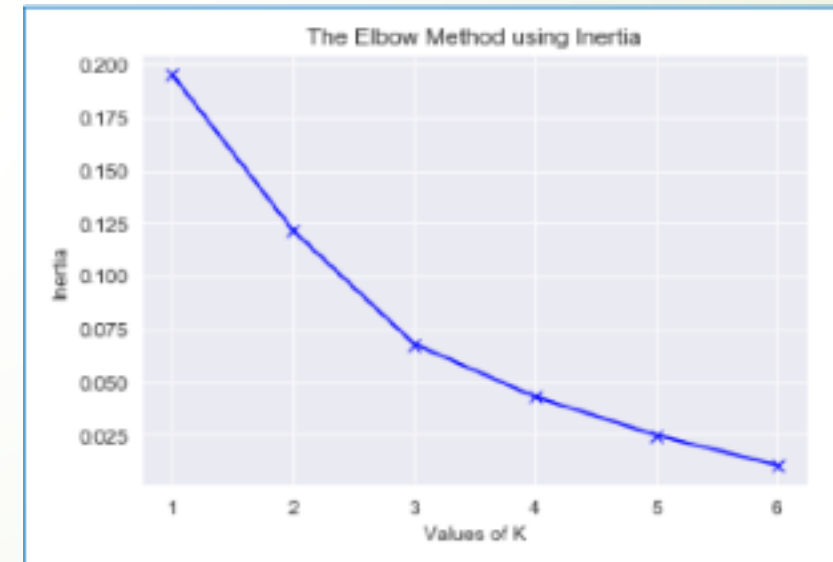
- Amsterdam boroughs
- Venue type and locations (Foursquare API)
- Boroughs segmentation
- Geolocation data
- Demographics

Data Processing and Visualization

- Check for missing data, filter unnecessary data (Fast-Food, Snack-Bars, etc.)
- Summary of Restaurants types per Borough
- Visualize relevant graphs
- Data processing for clustering: one-hot encoding

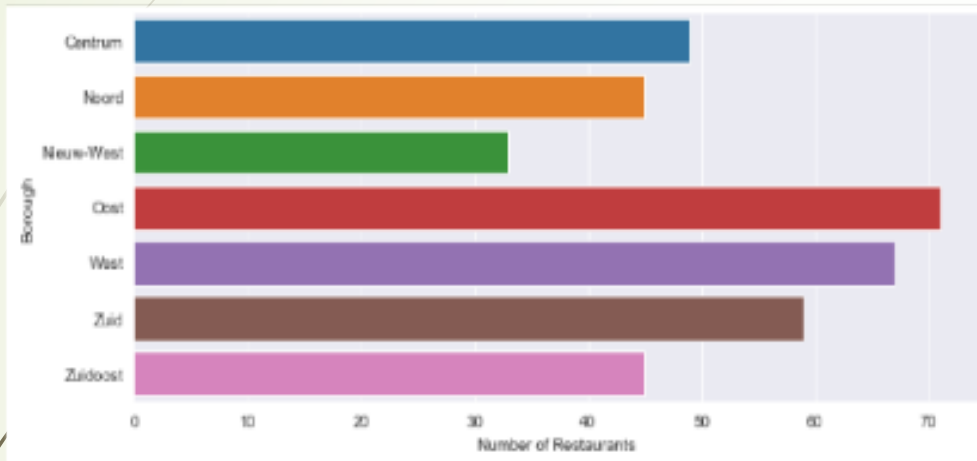
Clustering / mapping

- Identify optimal K [3] cluster number
- Perform K-Means clustering and add cluster labels to main table
- Use Folium to display the map of Amsterdam, clusters and restaurants



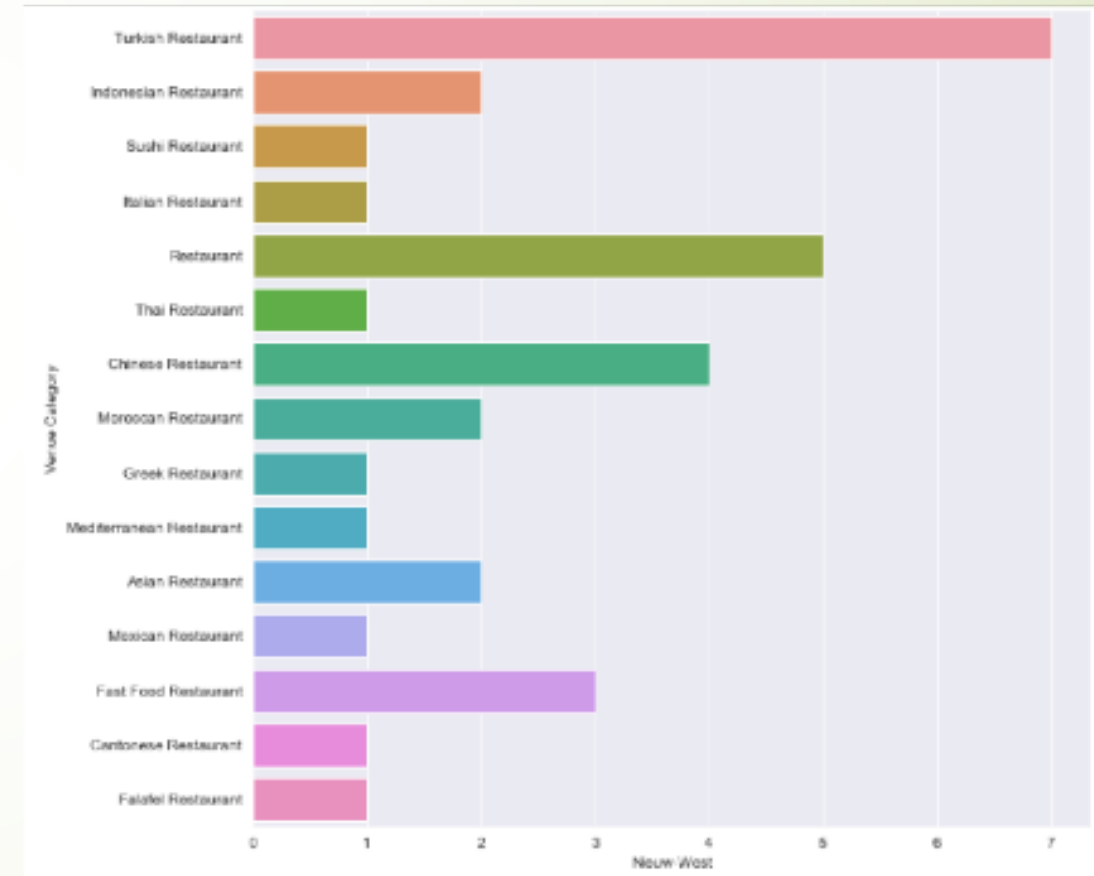
Visuals of relevant information

Restaurants per Borough

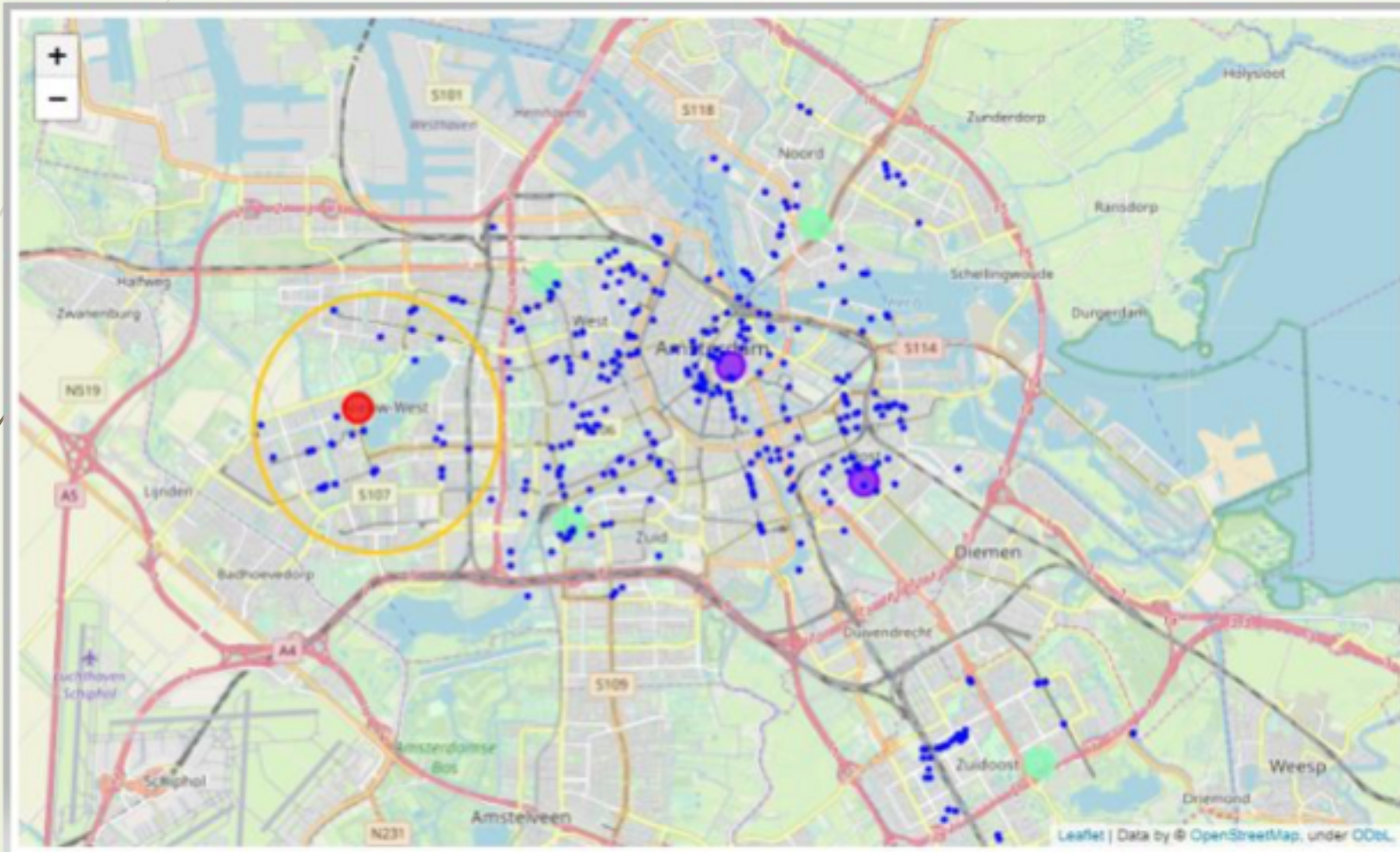


Borough	Borough Lat	Borough Lng	Venue	Venue Lat	Venue Lng	Venue Category
Centrum	49	49	49	49	49	49
Nieuw-West	33	33	33	33	33	33
Noord	45	45	45	45	45	45
Oost	71	71	71	71	71	71
West	67	67	67	67	67	67
Zuid	59	59	59	59	59	59
Zuidoost	45	45	45	45	45	45

Nieuw-West Borough



Amsterdam Map with clusters and Restaurants





Recommendation

1. Nieuw-West

Amsterdam **Nieuw-West** Borough with category type Restaurant **mean of 15%** and has a population of 151.677

2. Oost as an alternative Location

Amsterdam **Oost** Borough with category type Restaurant **mean 21%** and has a population of 135.767