



Coursera Capstone Project

IBM Professional Certification in Data Science

“The Battle of the Neighbourhoods”
Opening an Italian Restaurant in Amsterdam

By : Mohammad Saman
March 2020

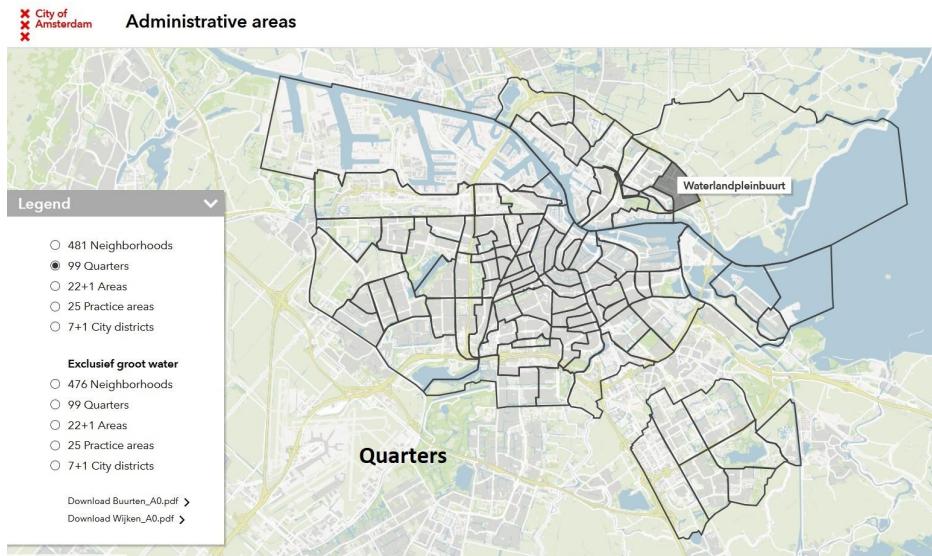


Business Problem

- Due to the vibrant nightlife and international atmosphere, Amsterdam hosts close to 16.5 million tourists each year.
- Business question : If you were to open an Italian themed restaurant in Amsterdam, which neighbourhood would you choose?
- Factors to consider:
 - High footfall areas, closer to city centre and major tourist attractions
 - Competition ! (Know Thy Enemy)
 - Reasonable monthly rent options

Data

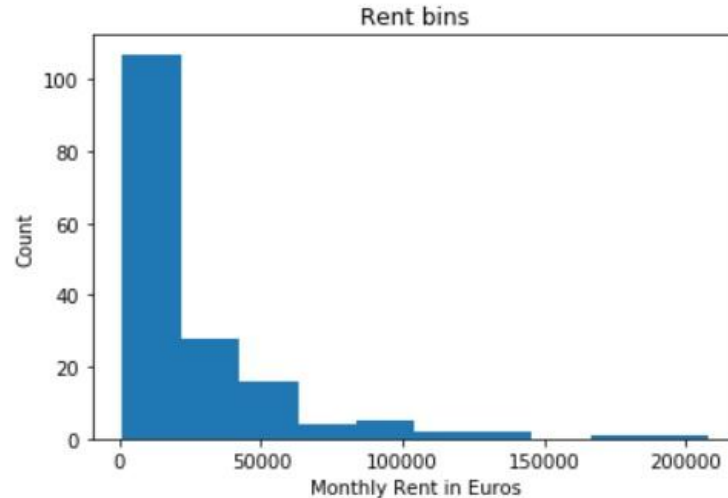
- List of neighbourhoods/quarters in Amsterdam (Latitude/Longitude)
- Venue data using Foursquare API
- Web scraping 'TheStorefront.com' for commercial properties



Factors to consider

	Neighbourhood	Venue Count	Italian Restaurant count
0	Grachtengordel-West	100	2
1	Grachtengordel-Zuid	100	7
2	Jordaan	100	2
3	Da Costabuurt	100	5
4	Museumkwartier	100	2
5	Burgwallen-Oude Zijde	100	1
6	Burgwallen-Nieuwe Zijde	100	4
7	De Weteringschans	100	4
8	Oude Pijp	100	2
9	Van Lennepbuurt	100	4
10	Kinkerbuurt	100	4
11	Nieuwe Pijp	94	5
12	Nieuwmarkt/Lastage	90	4
13	Chassébuurt	79	3
14	Helmersbuurt	71	3

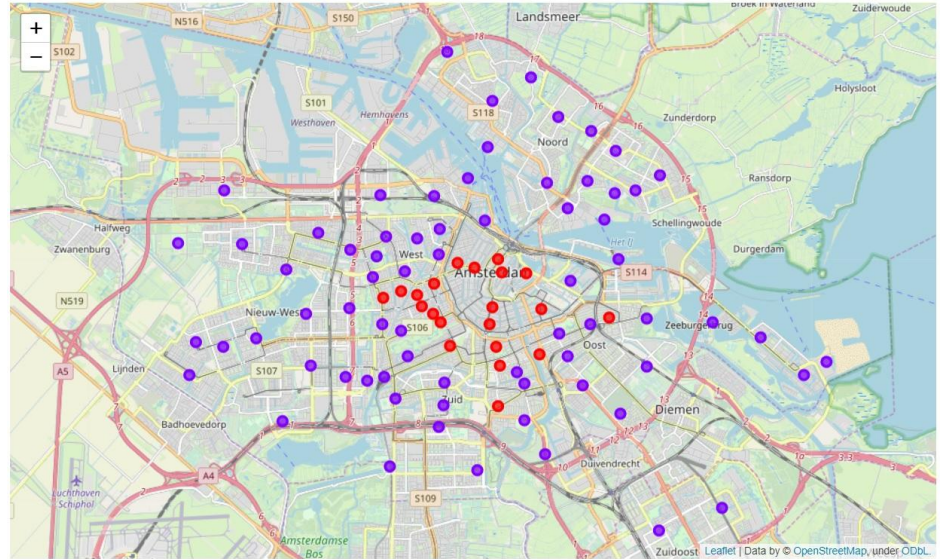
Venue count and competition



Distribution of Monthly Rent

Clustering

- Using K-Means clustering and adding venue count to the analysis for it to be the main driving force behind the clustering/segmentation.
- Clusters :
 - Cluster 0 (Red) : High venue count, high footfall, close to city centre
 - Cluster 1 (Purple) : Low venue count, low footfall, residential/office areas





Final selection

	Neighbourhood	Venue Count	count	Longitude	Latitude	1st Most Common Venue	2nd Most Common Venue	3rd Most Common Venue	4th Most Common Venue	5th Most Common Venue
0	Burgwallen-Oude Zijde	100	1	4.896943	52.372566	Bar	Hotel	Coffee Shop	Museum	Marijuana Dispensary
1	Burgwallen-Nieuwe Zijde	100	4	4.895518	52.375703	Bar	Coffee Shop	Italian Restaurant	Dessert Shop	Bakery
2	Grachtengordel-West	100	2	4.886836	52.373709	Bar	Hotel	Café	French Restaurant	Marijuana Dispensary
3	Grachtengordel-Zuid	100	7	4.893349	52.364821	Italian Restaurant	Marijuana Dispensary	Hotel	Movie Theater	Coffee Shop
4	Nieuwmarkt/Lastage	90	4	4.905641	52.372436	Bar	Hotel	Coffee Shop	Italian Restaurant	Chinese Restaurant
5	Jordaan	100	2	4.880786	52.374805	Bar	Café	Hotel	Coffee Shop	Yoga Studio
6	De Weteringschans	100	4	4.892427	52.361170	Bar	Coffee Shop	Café	Italian Restaurant	French Restaurant
7	Weesperbuurt/Plantage	66	1	4.911103	52.364499	Zoo Exhibit	Hotel	Bar	Restaurant	Café
8	Da Costabuurt	100	5	4.872120	52.370131	Bar	Coffee Shop	Italian Restaurant	Yoga Studio	Dutch Restaurant

Mapping the results

- **Red points** highlight the competition (other Italian Restaurants)
- **Blue points** highlight the neighbourhoods chosen from cluster analysis
- **Green points** highlight the filtered options for rented commercial property

