



# Exploration and Recommendations in Amsterdam city

The neighborhood Battle series

# Outline

## I. Introduction

- Problem statement
- Targets for bussiness

## II. Data collection

## III. Results and discussion

## IV. Conclusions

# I. Introduction

- The Amsterdam where I was visiting is one of the most populous cities in the world. Amsterdam is characterized by the large number of canals, museums, culture and arts which form a UNESCO World Heritage Site, then this city is definitely worth to explore and discover.
- The targets that exploration website aimed to are tourists, or even people in Netherlands but never go this place in life.
- I will present each part of the assignment and address them later. Firstly, I describe the Amsterdam data preparation and then go future steps to start the exploration of boroughs and neighborhoods in Amsterdam.

# I.1 Problem definition

- The total number of tourists coming to Amsterdam increase steadily every from 2014 to 2020. then the need of clear information and must-go areas or neighborhoods in Amsterdam should be provided in one website for tourist easy to find rather than going to each website and read for each distributed information that taking so much time and boring. Therefore, I assume that create a simple page with enough information about Amsterdams for tourist or people who loves Amsterdams to explore but with time reduction and be able to maximize the knowledge to visit Amsterdam. Furthermore, from this site , we can see that Amsterdams is one of the strong city for its competition in economics, then this place can be good candidate for start-up company want to seek profits. A good example for start-up company is to open a food chain restaurant in neighborhood where lots of people (e.g., with target is office workers, ...) but lack of diverse food.
- References:
  - <https://www.statista.com/statistics/658819/inbound-tourism-forecast-in-the-netherlands/>
  - <http://mori-m-foundation.or.jp/english/ius2/gpci2/index.shtml>

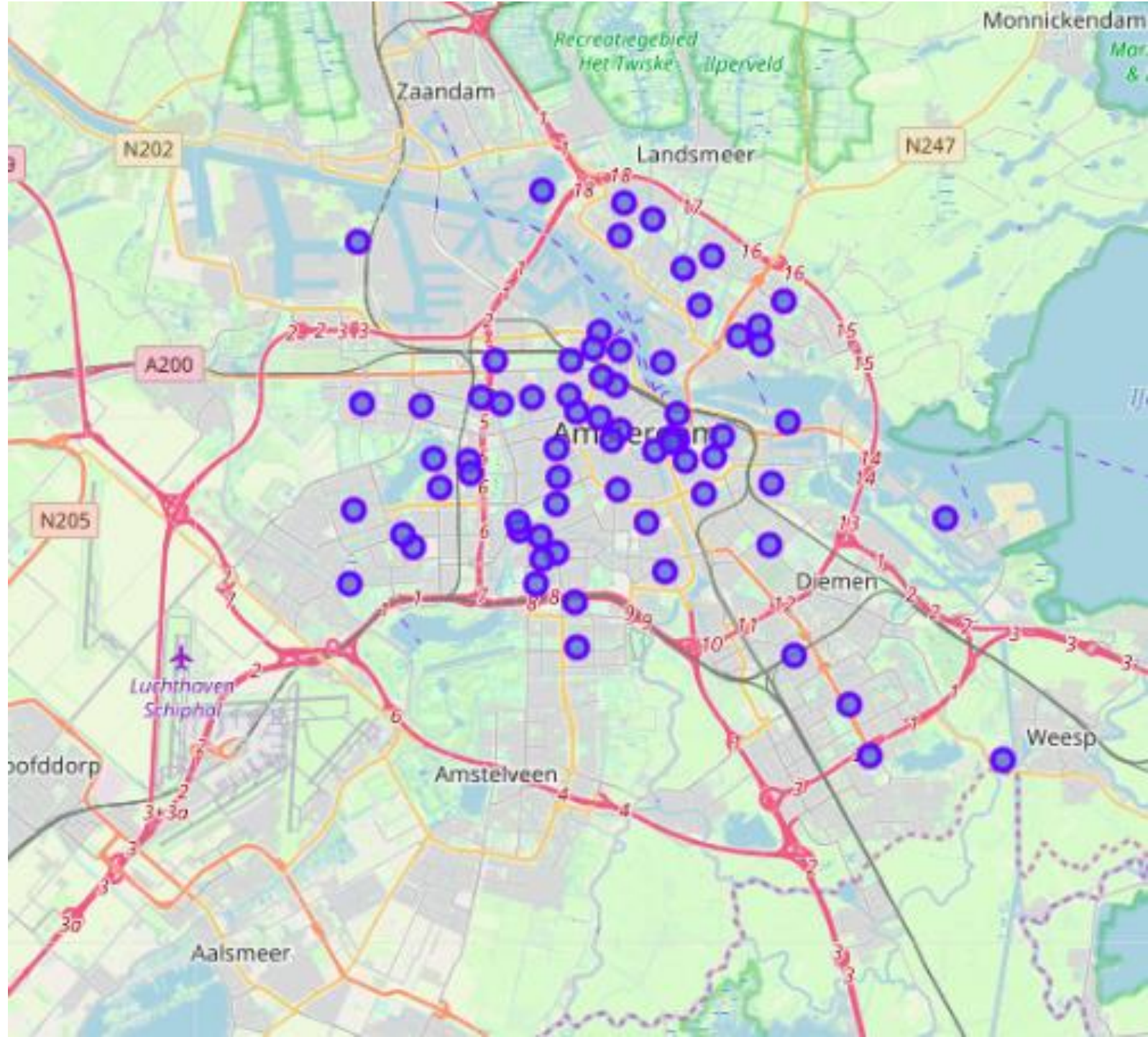
## II. Data collection

- Based on the previous discussion, there are some factors will effect our decision such as:
  - Number of venues that we can obtain.
  - The diverse ecology venues that Amsterdam having.
  - Number of neighborhoods.
  - How dense the population is in the desired area.
- First, the data will be will be obtained by extracting information about Amsterdam neighborhoods.
- Then, using Foursquare API to to obtain the coordination according to each neighborhood. And the data then will be shown in the map to confirm the precise of data collection.



## II. Data collection

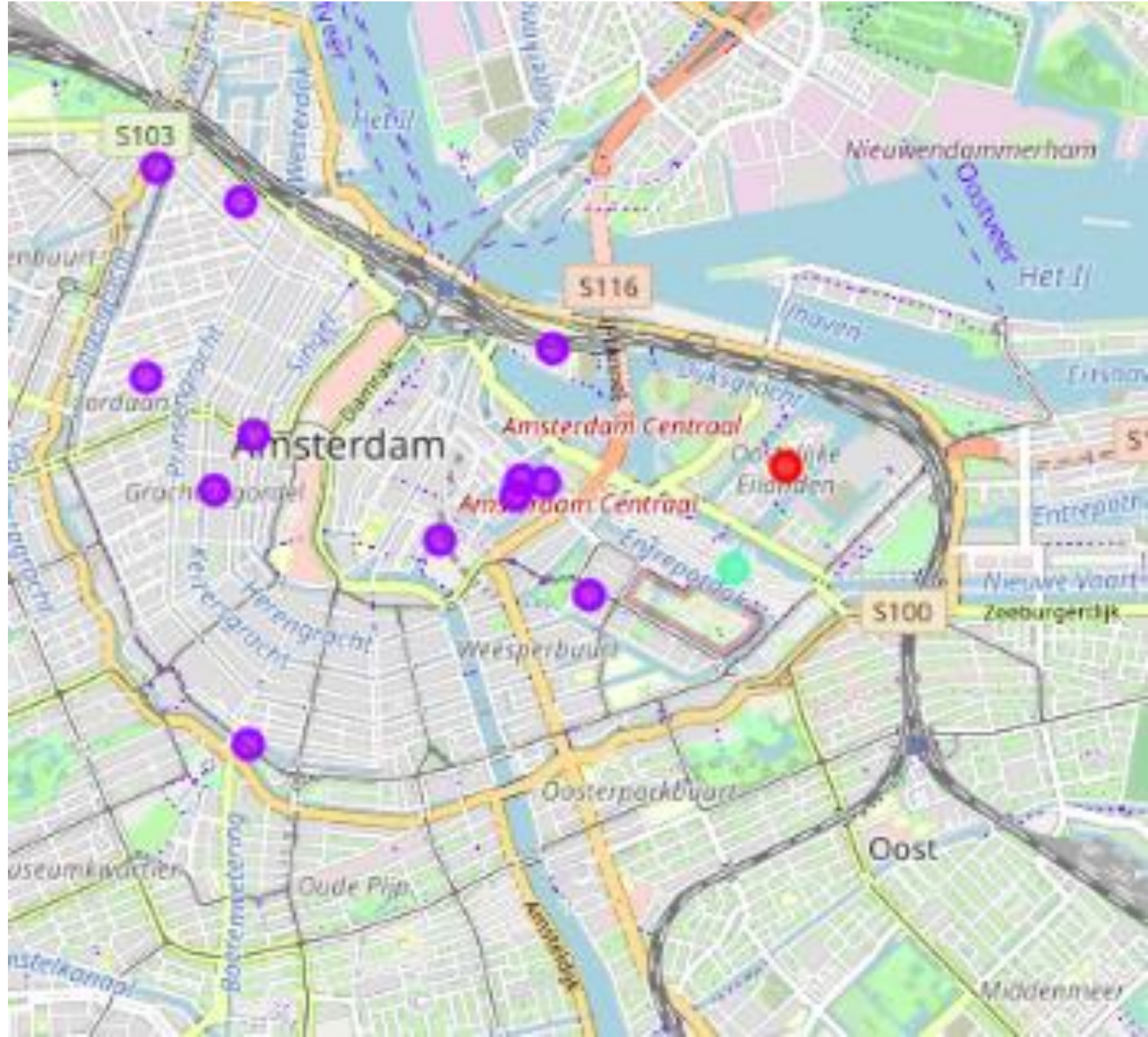
- Here we can see that all the neighborhood concentrating inside the Amsterdam area.
- This confirmed that our collection data process is completely on the right direction.
- Next step we will find out more about those clustering.





### III. Results and discussion

- As we can see that most of the area of Amsterdam has the same pattern with violet color, while there are two single neighborhoods that are a bit different from.
- Because the total number of neighborhood are small so we decided to choose the number of clusters are three.
- And the results seems to be quite biased.



## III.1 Results

	Neighborhood	1st Most Common Venue	2nd Most Common Venue	3rd Most Common Venue	4th Most Common Venue	5th Most Common Venue	6th Most Common Venue	7th Most Common Venue	8th Most Common Venue	9th Most Common Venue	10th Most Common Venue
8	Oostelijke Eilanden	Park	Gym / Fitness Center	Café	Bus Stop	Breakfast Spot	Mediterranean Restaurant	Pub	Hotel	Restaurant	Seafood Restaurant

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0	Binnenstad	Hotel	Café	Bar	French Restaurant	Dessert Shop	Bookstore	Marijuana Dispensary	Thrift / Vintage Store	Steakhouse	Italian Restaurant
1	Grachtengondel	Hotel	Bar	Restaurant	Bookstore	French Restaurant	Cheese Shop	Chocolate Shop	Sandwich Place	Café	Coffee Shop
2	Haarlemmerbuurt	Bar	Café	Italian Restaurant	Marijuana Dispensary	Deli / Bodega	Restaurant	Yoga Studio	Organic Grocery	Tapas Restaurant	Sandwich Place
3	Jodenbuurt	Marijuana Dispensary	Hotel	Bar	Italian Restaurant	Coffee Shop	Café	Theater	Sandwich Place	Gastropub	Brewery
4	Jordaan	Bar	Café	Coffee Shop	Hotel	Furniture / Home Store	Pizza Place	Thai Restaurant	Museum	Record Shop	Restaurant
6	Lastage	Bar	Hotel	Chinese Restaurant	Hostel	Italian Restaurant	Marijuana Dispensary	Cocktail Bar	Bagel Shop	Café	Coffee Shop
7	Oosterdokseland	Hotel	Restaurant	Bar	Hotel Bar	Italian Restaurant	Hotel	Pub	Boat or Ferry	Steakhouse	Coffee Shop
9	Plantage	Zoo Exhibit	Bar	Hotel	Café	Pizza Place	Breakfast Spot	Restaurant	Museum	History Museum	Italian Restaurant
10	Rapenburg	Bar	Hotel	Hostel	Coffee Shop	Italian Restaurant	Pizza Place	Breakfast Spot	History Museum	Boat or Ferry	Chinese Restaurant
11	Uilenburg	Bar	Hotel	Italian Restaurant	Marijuana Dispensary	Hostel	Bagel Shop	Café	Chinese Restaurant	Coffee Shop	Pizza Place
12	Westelijke Eilanden	Coffee Shop	Bar	Café	Restaurant	Italian Restaurant	Yoga Studio	Sandwich Place	Chinese Restaurant	Plaza	Gym / Fitness Center
13	Weteringschans	Bar	Café	Art Museum	Italian Restaurant	Coffee Shop	Restaurant	Museum	Hotel	Beer Garden	Marijuana Dispensary

```
# examine each classified group
center_merged.loc[center_merged['Cluster Labels'] == 2, center_merged.columns[[1] + list(range(5, center_merged.shape[1]))]]
```

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5	Kadijken	Zoo Exhibit	Restaurant	Plaza	Supermarket	Italian Restaurant	Hotel	Science Museum	Planetarium	Park	Museum



## III.2 Discussion

- As we can see from above frames, the group 1, is the neighbor named 'Oostelijke Eilanden' is populated with natural and friendly venues such as gyms, parks and bus stop.
- Whereas, in the group 0, they are mostly populated with food and beverage groups with so many bars, cafe, and Hotels.
- And in the group 2, we can easy to see that more green area with bus, park and entertainment area.

## IV. Conclusions

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- The goal of this project is to aim to exploration and see the patterns of Amsterdam so that in the final we can have at least some information about the city where someone would like to explore or visit in the future. To fulfill that, we have retrieve data about boroughs of only Amsterdam area where we are interested in, and collect some information such a longitude and latitude which are mandatory because we would like to use Foursquare API to retrieve the data about venues around Amsterdam.
- In addition, we had explore some common places in all neighborhoods of central area where the population per square kilometer is dense and there are a lot of interesting venue to visit.