

A circular inset image showing a vibrant Amsterdam canal scene. The water is calm, reflecting the golden light of the setting or rising sun. A row of colorful, multi-story buildings with traditional Dutch architecture lines the canal. A small bridge is visible in the background, and a yellow and red boat is docked on the right. In the foreground, the wooden structure of a boat is partially visible.

IBM DATA SCIENCE CAPSTONE PROJECT

THE BATTLE OF NEIGHBORHOODS –
ANALYZED ON AMSTERDAM

BUSINESS PROBLEM

1. Is the place suitable for opening a restaurant?
2. Is it a good place for a contractor to start his/her own business, i.e. to setup his/her office?

OUR GOAL

To analyze: Is Amsterdam being a well multicultural place to satisfy the above two main business problem?

INTRODUCTION ON AMSTERDAM

- The largest city in the Netherlands
- Have a population of 1.16 million
- This place with approximately 178 different cultural backgrounds
- It hosts many cultural events throughout the year, which emphasizes their worldly view

DESCRIPTION OF DATASET

- Data scraping from [https://en.wikipedia.org/wiki/Category:Neighbourhoods of Amsterdam](https://en.wikipedia.org/wiki/Category:Neighbourhoods_of_Amsterdam) to get **Neighbourhoods of Amsterdam**
- Use geopy library to get the **latitude and longitude values of Amsterdam**
- Use Foursquare API to get data of venue

METHODOLOGY

- Explore and load dataset from website link
- Data transformation by pandas
- Use one-hot encoding to do features extraction
- Get latitude and longitude values of Amsterdam and plot the map
- Apply FourSquare API in all the neighbourhoods on Amsterdam
- Use k-means clustering to visualize the clusters

THANK YOU!

End of week 4's task