



CAPSTONE PROJECT: THE BATTLE OF NEIGHBORHOODS

IBM DATA SCIENCE PROFESSIONAL
CERTIFICATE

WEEK 1

INTRODUCTION

- New York is the largest city of United States. The city itself has a population of 8.398.748 in 2018 and the metropole region even more with about 19.979.477.
- More or less every big company is also based in New York. On the other hand quite a lot of small companies are also trying to establish themselves in this area.
- Somehow NY can be understood as the bridge between Europe and the more western American area.
- Also with its diverse culture, comes diverse food items. There are many restaurants in New York, each belonging to different categories like Chinese, Italian, French etc.

BUSINESS PROBLEM

- If you want to start your business in a city, the location is one of the most important factors contributing to the success of the company
- Therefore several factors are relevant in order to find the best location:
 - Infrastructure
 - Demographics
 - Office spaces
 - etc.
- Use Case:
 - Setting up an office

RESEARCH QUESTION

- Questions that can be asked using the above mentioned datasets
- Which factors are beneficial, if you want to set up an office ?
- What is best location in New York City for setting up an office?
- Which areas have a high concentration of office spaces ?
- Which areas are less characterized by a lot of office spaces ?
- Which is the best place to set up an office, if you want to work in tech ?
- Which area encloses the most successful companies in New York ?

APPROACH

- Collect the New York City data from NYU dataset
- Using FourSquare API in order to find all venues for each neighborhood.
- Filtering out all venues that are nearby by locality.
- Using aggregative ratings for each office space in order to find most appropriate place.
- Focusing on the initial business problem: setting up an office
- Visualizing the Ranking of neighborhoods using folium library (python)
- Based on the ranking a decision can be made where in NY you should set up an office

DATA FOUNDATION

- Publisher: New York (City). Department of City Planning
- Collection: Bytes of the Big Apple
- Place(s): New York, New York, United States
- Subject(s): Neighborhoods, Neighborhood planning, and Communities
- Format(s): Shapefile
- Year(s): 2014
- Link: https://geo.nyu.edu/catalog/nyu_2451_34572
- Additionally: Nearby places in each locality of New York City.
- Data source : Fousquare API
- Description : By using this api we will get all the venues in each neighborhood

