The Battle of Neighborhoods (week 1)

General information

This project is intended for those who plan to move to a new apartment in the city of Vienna. Provides a suggestion on what would be the best area in Vienna to get an apartment that already has a lot good apartments. Vienna is the most densely populated city in Austria, with about 1.9 million inhabitants, and an economic and political center. It is the 6th largest city by population within the city limits in the European Union.

Business problem

This project focuses on the issue of finding an apartment for rent in a city like Vienna. Those interested in this project would be people who want to rent an apartment.

The business problem could provide people with information such as
- Which area has the cheapest rent
- Choose to live in residential or commercial areas and see for example which home or areas are best

If they already live in an area of Vienna, they will be able to see:
- If they pay more than the average price for their apartment
- If there are similar areas to their own with lower rents1

Data & Usage

Two sources are identified as potential platforms of data we need for exploratory and descriptive analysis. One source is a popular apartment listings website 'willhaben.at' and the latter is 'Foursquare'.
We use web scraping to derive from the website and use Beautiful Soup library to parse and extract required field of interest like size of the apartment, number of rooms, address, price.
Data is derived from Foursquare by making API calls to endpoints exposed by the data provider. Features of interest from this provider would by closet venues like supermarket, restaurant, theater, park etc.
After data wrangling procedures are performed on the collected data, it is taken to next step to cluster the districts into residential and commercial areas and visualize all the data on a single choropleth map using k-means clustering unsupervised machine learning algorithm.