

A photograph of a modern, multi-story apartment building with a light-colored, textured facade. The building features several balconies with dark metal railings and large windows. The lighting suggests it's either early morning or late afternoon, with a warm glow. The text is overlaid on the left side of the image.

Battle of the Neighborhoods 'Which Apartment Area to Rent?'

Capstone Project Week 4

Table of contents:



1. Description of Data

1. Description of Data

1. List of Toronto neighborhoods area will be taken from <https://www.wikipedia.org/>
 - https://en.wikipedia.org/wiki/List_of_postal_codes_of_Canada:_M
2. This page will provide the information on Toronto neighborhoods, boroughs and postal codes.
3. There are several steps we need to perform before we can analyze the data. Those steps are:
 - i. Scrape the information from this Wikipedia page.
 - ii. Wrangle the data and clean it.
 - iii. Read it into a *pandas* Dataframe so that it is in a structured format as the figure below.

	Post Code	Borough	Neighborhood
0	M3A	North York	Parkwoods
1	M4A	North York	Victoria Village
2	M5A	Downtown Toronto	Regent Park, Harbourfront
3	M6A	North York	Lawrence Manor, Lawrence Heights
4	M7A	Downtown Toronto	Queen's Park, Ontario Provincial Government

Pandas Dataframe for data taken from https://en.wikipedia.org/wiki/List_of_postal_codes_of_Canada:_M

1. Description of Data

1. The next data source will provide us with the geographical coordinates of the neighborhoods with the respective Postal Codes
2. The data will be taken from from https://cocl.us/Geospatial_data in the form of csv file.
3. Next, the list of geographical coordinates (latitude, longitude) will be merge with the list of Toronto data from Wikipedia to form a pandas Dataframe.

	Postal Code	Latitude	Longitude
0	M1B	43.806686	-79.194353
1	M1C	43.784535	-79.160497
2	M1E	43.763573	-79.188711
3	M1G	43.770992	-79.216917
4	M1H	43.773136	-79.239476

Data from https://cocl.us/Geospatial_data

	Postal Code	Borough	Neighbourhood	Latitude	Longitude
0	M3A	North York	Parkwoods	43.753259	-79.329656
1	M4A	North York	Victoria Village	43.725882	-79.315572
2	M5A	Downtown Toronto	Regent Park, Harbourfront	43.654260	-79.360636
3	M6A	North York	Lawrence Manor, Lawrence Heights	43.718518	-79.464763
4	M7A	Downtown Toronto	Queen's Park, Ontario Provincial Government	43.662301	-79.389494

Merged data from https://cocl.us/Geospatial_data and <https://www.wikipedia.org/>

1. Description of Data

1. The last data source will be from <https://foursquare.com/>.
2. We will construct a URL to send a request to the Foursquare API to search for a specific type of venues and to get trending venues around the Downtown Toronto location and construct it in a pandas Dataframe.
3. Next, we will acquire the information on venue category based on the list of requests given by our client from the Foursquare data.
4. Finally, the data in the Dataframe will be subject to K-Means Clustering.

	Neighbourhood	Neighbourhood Latitude	Neighbourhood Longitude	Venue	Venue Latitude	Venue Longitude	Venue Category
0	Regent Park, Harbourfront	43.65426	-79.360636	Tandem Coffee	43.653559	-79.361809	Coffee Shop
1	Regent Park, Harbourfront	43.65426	-79.360636	Roselle Desserts	43.653447	-79.362017	Bakery
2	Regent Park, Harbourfront	43.65426	-79.360636	Cooper Koo Family YMCA	43.653249	-79.358008	Distribution Center
3	Regent Park, Harbourfront	43.65426	-79.360636	Body Blitz Spa East	43.654735	-79.359874	Spa
4	Regent Park, Harbourfront	43.65426	-79.360636	Impact Kitchen	43.656369	-79.356980	Restaurant

Data from <https://foursquare.com/>