Introduction/Business Problem:

The idea is to find neighborhood in Toronto city of Canada that has all the basic necessity shops within kilometers of the living place. People who are new to the city or shifting from another city to Toronto may require a place to live in. It might be difficult for them to find the neighborhood with all their necessities. The aim of the project is to divide the city neighborhoods in different categories according to shops and facilities available in the neighborhoods. The Foursquare API will be used to find all the nearby venues in neighborhoods and retrieve categories and count of shops in each category for each neighborhood. For this project, basic necessities are considered as required factors to divide neighborhoods in the categories. It would be very helpful for people new in the city as they will be able to identify neighborhood according to their needs.

Data:

Data of boroughs and neighborhoods of the Toronto City would be retrieved from Wikipedia (https://en.wikipedia.org/wiki/List_of_neighbourhoods_in_Toronto). The data is there in form of tables with postal codes and names of neighborhoods in each of the Borough. The Foursquare data would be used to retrieve Longitude and Latitude of each neighborhood. Then, it would be used to retrieved nearby venues of each neighborhood. The Wikipedia data would be retrieved by web scraping the page with BeautifulSoup library of python.

- Wikipedia Data: Columns Retrieved: Borough, Postal Code, Neighborhoods
- Foursquare Data: Latitude, Longitude, Venues, Category

Example:

Consider North York Borough of Toronto City. It has many neighborhoods in it which it has multiple postal codes for multiple Neighborhoods. For ex, M3A postal codes belongs to Parkwood neighborhood and M4A belongs to Victoria Village. Foursquare will provide longitude and latitude of Parkwood which is -79.329656 and 43.753259 respectively. Foursquare will also provide venues near Parkwood like Cafes, Parks etc.