Good or bad idea to open a food supply supermarket in West Toronto neighborhood?

Introduction:

Nowadays, people consume a lot of products and goods for daily eating and are eating in more varieties. With increased interest in trying new and diversified things including food choices, different restaurants are constantly working to get best quality ingredients and in fastest speed. As a popular modern city, Toronto has different parts that are great for dining out. Specifically, West Toronto has been a possible location for a food supply supermarket to open its store.

Since people scatter around the city, it is hard for suppliers to know the demand of food in a concrete way. Hence, I would explore west Toronto to see how places cluster and whether the clusters formed in west Toronto can give some insight as to whether it is a good idea to set up food supply supermarket there or not.

Data:

The data that I will use as source include the Foursquare data I obtained as a Foursquare developer and Canada neighborhood information wikipedia page. Foursquare is a platform that users can find local or distant locations' information, such as popular places nearby, people's reviews of places as well as ratings.

The data that can be obtained and used for finding out perfect location for opening health supplement store is obtained based on developer account capabilities, not simply on user's account capability. In particular, the data essential for the task deals with geographical information of West Toronto as well as geographical spread out of different kinds of places in west Toronto. With detailed knowledge of these former information, people can use Python together with Foursquare API to find out places that cluster near each other and conclude what are some common types of groups of stores in West Toronto.

The Canada neighborhood wikipedia page provides detailed information about Toronto all neighborhood and their longitude and latitude. This information creates a base for later analyzing the geographic Toronto layout and detailed data visualization.

Methodology:

To start, I begin websrapping the relvent data about neighbohood in the Canada neighborhood wikikipedia link (https://en.wikipedia.org/wiki/List_of_postal_codes_of_Canada:_M) and obtain the table part showing deatiled neighborhood list in Python Jupyter notebook. Then the data gets cleaned out in better organized format and transformed to dataframe that is related only to borough west Toronto. Then I utilized Foursquare API and geopy function in Jupyter Notebook to find out the latitude and longitude of West Toronto.

Later on, to better find out clusters. I first use request function to find out top 100 venues in west Toronto read them into dataframe. The total 100 venues are then been better filter to get nearby venues for each neighborhood in west Toronto. These venues were organized showing its categories and longitude, latitude. Finally, with getting only top-10 venues per neighborhood, I built out clusters and visualized the clusters using matplotlib. While setting cluster numbers of 5, each cluster is being displayed in detail such as category, and its common venue in order.

Finally, just want to make sure that the whole area in west Toronto has any trending venues that is not related to food, since stores in not food related venue do not add up value to the food supply supermarket and may harm its demand. I utilized the trending query of Foursquare API to see whether there is trending venue or not and what its category is.

Result:

With clusters amount being set at 5 originally, the process produces 5 clusters as supposed. First cluster has most common venue as bar and coffee shop, second cluster has most common venue as Mexican Restaurant, third cluster has most common venue as Pizza Place,fourth cluster has most common venue as bakery, fourth cluster has most common venue as coffee shop.

All clusters are mainly food related and centered.

Fourthermore, with further exploration, there is no trending venue in West Toronto.

Discussion:

In the first sight of the result, West Toronto is a great place that has lots of restaurants and cafes gathering. This is supported byall 5 clusters main and common venue are linked to restaurants. It seems that this is the place that could be great for a supermarket to exist and work as supplier of great ingredients for local people and stores.

However, with detailed exploration, I found out that the fourth cluster's second common venue is supermarket. That means that there are existing supermarkets in west Toronto already. Furthermore, the second cluster's fourth common venue is a grocery store, this also shows there is some extent of ingredients supply already in that area.

Conclusion:

West Toronto has great gathering of restaurants and food places, with few supermarkets and grocery stores in 2 main clusters already.

But not all 5 clusters have supermarkets accessible, that means the competition in the other 3 clusters are none.

If the business person plans to open a food supply supermarket, he could open it in cluster 1, 3, 5, with each in latitude in 43.647927 and 43.648960 ,43.651571, and 43.636847, and longitude all in -79.3727924125372.