1.Introduction

1.1 background

New York City and Toronto are among the biggest cities in northern America, both cities are very diverse, multicultural and financial capitals of their respective countries. Thus, I am interested in comparing the two cities and their neighborhoods with an intention of determining how similar or dissimilar they are. Also, I will explore the different activities in those two cities. With this in mind, I will come up with the best city to invest in if someone is interested in starting a restaurant.

1.2 Problem

Data that might help the business person to choose the best place to start a restaurant might be included but not limited to the number of boroughs and neighborhoods, number of restaurants or other business activities which are related to restaurants, number of population of the cities and level of entertainment.

1.3 Interest

This analysis will help business persons to decide where to start a restaurant business and this will be influenced by the different factors as we have seen above. This also will help the worker or tourist to know the good place to walk.

2. Part_ Data acquisition and cleansing

I will use the data of: **Newyork City**.
New York City has 5 boroughs as shown below.

New York City's five boroughs							V·T·E
Jurisdiction		Population	Gross Domestic Product		Land area		Density	
Borough	County	Estimate (2019)	billions (2012 US$)	per capita (US$)	square miles	square km	persons / mi²	persons / km²
The Bronx	Bronx	1,418,207	42.695	30,100	42.10	109.04	33,867	13,006
Brooklyn	Kings	2,559,903	91.559	35,800	70.82	183.42	36,147	13,957
Manhattan	New York	1,628,706	600.244	368,500	22.83	59.13	71,341	27,544
Queens	Queens	2,253,858	93.310	41,400	108.53	281.09	20,767	8,018
Staten Island	Richmond	476,143	14.514	30,500	58.37	151.18	8,157	3,150
City of New York		8,336,817	842.343	101,000	302.64	783.83	27,547	10,636

We will be using the below datasets for analysing Newyork city

Data 1 : Neighborhood has a total of 5 boroughs and 306 neighborhoods. In order to segment the neighborhoods and explore them, we will essentially need a dataset that contains the 5 boroughs and the neighborhoods that exist in each borough as well as the latitude and longitude coordinates of each neighborhood.

This dataset exists for free on the web. Link to the dataset is :
https://geo.nyu.edu/catalog/nyu_2451_34572

Data 2 : Second data which will be used is the DOHMH Farmers Markets and Food Boxes dataset. In this we will be using the data of Farmers Markets.

https://data.cityofnewyork.us/dataset/DOHMH-Farmers-Markets-and-Food-Boxes/8vwk-6iz2

Website-https://www.grownyc.org/greenmarketco/foodbox

GrowNYC's Fresh **Food Box** Program is a food access initiative that enables under-served communities to purchase fresh, healthy, and primarily regionally grown produce well below traditional retail prices.

A **farmers' market** is often defined as a public site used by two or more local or regional producers for the direct sale of farm products to consumers. In addition to fresh fruits and vegetables, markets may sell dairy products, fish, meat, baked goods, and other minimally processed foods.

Data 3 : For the below analysis we will get data from wikipedia as given below :

1. New York Population
2. New York City Demographics
3. Cuisine of New York city

https://en.wikipedia.org/wiki/New_York_City
https://en.wikipedia.org/wiki/Economy_of_New_York_City
https://en.wikipedia.org/wiki/Portal:New_York_City
https://en.wikipedia.org/wiki/Cuisine_of_New_York_City
https://en.wikipedia.org/wiki/List_of_Michelin_starred_restaurants_in_New_York_City

Data 4 : New York city geographical coordinates data will be utilized as input for the Foursquare API, that will be leveraged to provision venues information for each neighborhood.We will use the Foursquare API to explore neighborhoods in New York City. The below is an image of the Foursquare API data.

	Neighborhood	Neighborhood Latitude	Neighborhood Longitude	Venue	Venue Latitude	Venue Longitude	Venue Category
0	Wakefield	40.894705	-73.847201	Lollipops Gelato	40.894123	-73.845892	Dessert Shop
1	Wakefield	40.894705	-73.847201	Rite Aid	40.896521	-73.844680	Pharmacy
2	Wakefield	40.894705	-73.847201	Cooler Runnings Jamaican Restaurant Inc	40.898283	-73.850478	Caribbean Restaurant
3	Wakefield	40.894705	-73.847201	Carvel Ice Cream	40.890487	-73.848568	Ice Cream Shop
4	Wakefield	40.894705	-73.847201	Dunkin Donuts	40.890631	-73.849027	Donut Shop