Data

For the comparison of Toronto and New York neighborhoods, the following data will be used:

- Toronto data that contains different borough, neighborhoods and their postal codes https://en.wikipedia.org/wiki/List_of_postal_codes_of_Canada:_M

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	Postalcode	Borough	Neighborhood
0	M1B	Scarborough	Rouge, Malvern
1	M1C	Scarborough	Highland Creek, Rouge Hill, Port Union
2	M1E	Scarborough	Guildwood, Morningside, West Hill
3	M1G	Scarborough	Woburn
4	M1H	Scarborough	Cedarbrae

- Coordinates of the Toronto neighborhoods http://cocl.us/Geospatial_data/Geospatial_Coordinates.csv

	Postalcode	Borough	Neighborhood	Latitude	Longitude
0	M1B	Scarborough	Rouge, Malvern	43.806686	-79.194353
1	M1C	Scarborough	Highland Creek, Rouge Hill, Port Union	43.784535	-79.160497
2	M1E	Scarborough	Guildwood, Morningside, West Hill	43.763573	-79.188711

- New York data containing different boroughs, neighborhoods and their coordinates https://cocl.us/new_york_dataset

2]:
```
{'type': 'Feature',
 'id': 'nyu_2451_34572.1',
 'geometry': {'type': 'Point',
  'coordinates': [-73.84720052054902, 40.89470517661]},
 'geometry_name': 'geom',
 'properties': {'name': 'Wakefield',
  'stacked': 1,
  'annoline1': 'Wakefield',
  'annoline2': None,
  'annoline3': None,
  'annoangle': 0.0,
  'borough': 'Bronx',
  'bbox': [-73.84720052054902,
   40.89470517661,
   -73.84720052054902,
   40.89470517661]}}
```

- The coordinates (latitude, longitude) of the neighborhoods of Downtown Toronto and Manhattan using geolocator

```
# Let's get the geographical coordinates of Manhattan.
address = 'Manhattan, NY'

geolocator = Nominatim()
location = geolocator.geocode(address)
latitude = location.latitude
longitude = location.longitude
print('The geograpical coordinate of Manhattan are {}, {}.'.format(latitud
```

```
/opt/conda/envs/Python36/lib/python3.6/site-packages/ipykernel/__main__
nt` is strongly discouraged, as it violates Nominatim's ToS https://ope
P errors. Please specify a custom `user_agent` with `Nominatim(user_age
tions.default_user_agent = "my-application"`. In geopy 2.0 this will be

The geograpical coordinate of Manhattan are 40.7900869, -73.9598295.
```

From Foursquare API, we will need the following data:

- Nearby venue names with their latitudes and longitudes

	Neighborhood	Neighborhood Latitude	Neighborhood Longitude	Venue	Venue Latitude	Venue Longitude	Venue Category
0	Rosedale	43.679563	-79.377529	Mooredale House	43.678631	-79.380091	Building
1	Rosedale	43.679563	-79.377529	Rosedale Park	43.682328	-79.378934	Playground
2	Rosedale	43.679563	-79.377529	Whitney Park	43.682036	-79.373788	Park
3	Rosedale	43.679563	-79.377529	Alex Murray Parkette	43.678300	-79.382773	Park
4	Rosedale	43.679563	-79.377529	Milkman's Lane	43.676352	-79.373842	Trail

- Top 5 most common venues for each neighborhood
- Top 10 most common venues for each neighborhood

	Neighborhood	1st Most Common Venue	2nd Most Common Venue	3rd Most Common Venue	4th Most Common Venue	5th Most Common Venue	6th Most Common Venue	7th Most Common Venue	8th Most Common Venue	9th Most Common Venue	10th Most Common Venue
0	Adelaide, King, Richmond	Coffee Shop	Café	Thai Restaurant	Bar	American Restaurant	Steakhouse	Gym	Burger Joint	Sushi Restaurant	Hotel
1	Berczy Park	Coffee Shop	Cocktail Bar	Café	Beer Bar	Bakery	Seafood Restaurant	Farmers Market	Steakhouse	Cheese Shop	Eastern European Restaurant
2	CN Tower, Bathurst Quay, Island airport, Harbo...	Airport Service	Airport Lounge	Airport Terminal	Harbor / Marina	Bar	Coffee Shop	Plane	Sculpture Garden	Boutique	Boat or Ferry
3	Cabbagetown, St. James Town	Coffee Shop	Café	Pub	Italian Restaurant	Park	Bakery	Pizza Place	Restaurant	Japanese Restaurant	Sandwich Place

- Average Income, Population and Density of New York
  -Wikipedia (Demographics of New York City)
- Average Income, Population and Density of Toronto

-Wikipedia (Demographics of Toronto neighbourhoods)