

# Potential Retail Line Investment In Toronto and New York

10 Jun 2020

# Background

- New York City & City of Toronto
  - World busiest financial centres
  - Vast amount of opportunities for retail businesses
- Problems Statement
  - Vast investment opportunities in retail lines
  - Resources limited, needs for increased probability of business success
- Primary questions
  - What would be the top 5 retail shops in both Toronto and New York business districts?
  - If someone wants to setup a retail line in Toronto or New York, which retail line would be a safe bet given the current cluster of shops in these cities?

# Data Requirements

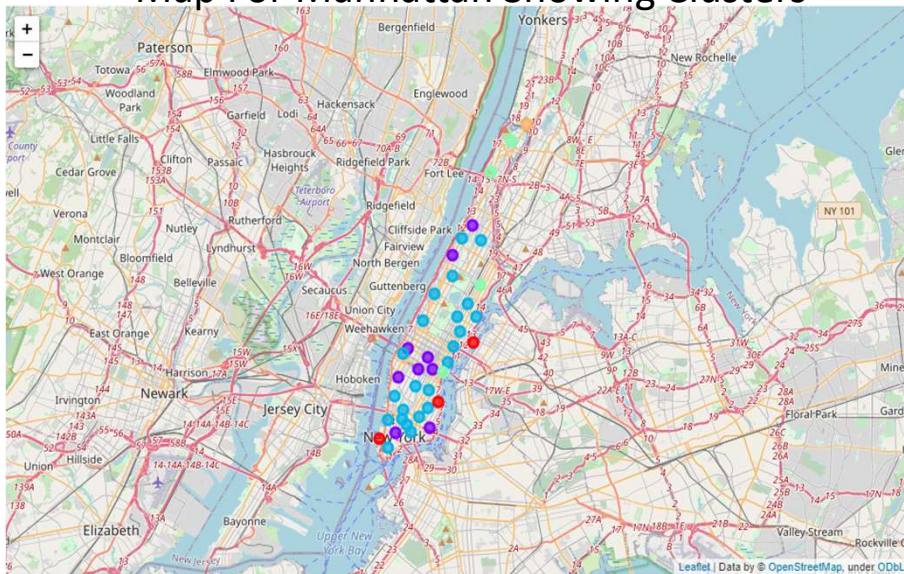
- Data Requirements
  - List & type of retail shops in Toronto & New York business districts
  - Ratings & reviews on type of popular retail lines in Toronto & New York
  - Trending data will be an added advantage
- Data Preparation
  - Data Analysis Platform
    - Python Programming Language
  - Data Sources
    - New York City (URL : [https://cocl.us/new\\_york\\_dataset](https://cocl.us/new_york_dataset))
    - Toronto (URL: [https://en.wikipedia.org/wiki/List\\_of\\_postal\\_codes\\_of\\_Canada:\\_M](https://en.wikipedia.org/wiki/List_of_postal_codes_of_Canada:_M))
    - Foursquare information on venues (URL : <https://foursquare.com>)

# Exploratory Data Analysis / Modelling

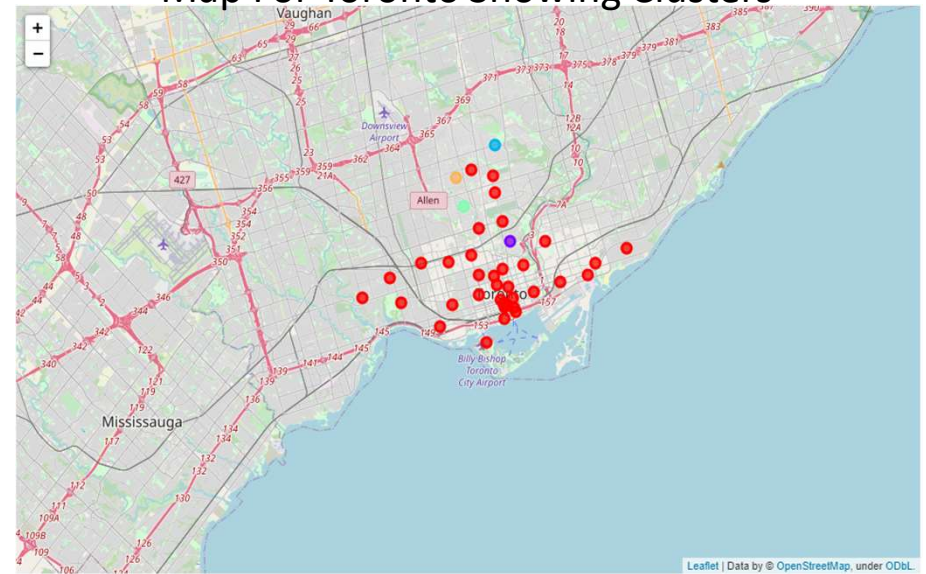
- Data Exploration & Analysis
  - Foursquare API
    - ***Explore*** Function
  - Python
    - Geopy Library
    - Folium Library
    - One-Hot Encoding
    - Clustering

# Results - Clustering

Map For Manhattan Showing Clusters



Map For Toronto Showing Clusters



# Results – One-Hot Encoding

S/N	Manhattan Cluster				
	0	1	2*	3	4
1	Park	Coffee Shop	Italian Restaurant	Mexican Restaurant	Sandwich Place
2	Playground	Hotel	Coffee Shop	Café	Coffee Shop
3	Coffee Shop	Café	Pizza Place	Bakery	Gym
4	Farmers Market	Pizza Place	Café	Deli / Bodega	Yoga Studio
5	Baseball Field	American Restaurant	Bar	Park	Supplement Shop

\*Note : Top cluster with majority of neighbourhoods in the city

S/N	Toronto Cluster				
	0*	1	2	3	4
1	Coffee Shop	Park	Park	Mexican Restaurant	Music Venue
2	Café	Playground	Swim School	Jewelry Store	Ice Cream Shop
3	Park	Trail	Bus Line	Trail	Garden
4	Restaurant	Department Store	Yoga Studio	Sushi Restaurant	Dog Run
5	Italian Restaurant	Event Space	Diner	Yoga Studio	Dessert Shop

\*Note : Top cluster with majority of neighbourhoods in the city

# Conclusion

- High Similarities between Manhattan & Toronto
- Majority of top categories in neighbourhoods
  - Eateries
- Common top five categories in key clusters
  - Coffee Shop
  - Café
  - Italian Restaurant
- Increased success probabilities with the identified categories