



GET WHAT YOU NEED AT THE RIGHT TIME

WHERE WOULD YOU LOCATE A LOGISTIC CENTRE

What Are Logistics?

Process of managing how resources are acquired, stored, and transported to their final destination.

Getting it to the appropriate location in proper condition, and delivering it to the correct customer.

PROJECT SCOPE



Toronto is the chosen city, due to its highly diversified with strong adoption in technology and financial service.

Our goal is to select an area that will cover a large population, in a short distance from our customers.

Define our customers focus based on the most common profiles found and provide a tailored solution for their logistics (from storage to delivery options).

VALUE PROPOSITION

Logistics costs represent a big percentage of the products supplied, independently of the type or nature of it.

The logistics process involves several elements, which add costs such as:

- Storage, warehousing and materials handling.
- Packaging and unitization.
- Inventory.
- Transport.
- Information and control.

We aim to lower those costs by outsourcing, creating synergy which will increase our clients profitability:

- ✓ Improve Customer Satisfaction by right on time deliveries.
- ✓ Minimize Translation times.
- ✓ Centralize Procurement.
- ✓ Consolidate Shipments.
- ✓ Data analytics for Decision Making.
- ✓ Automate Warehouse and Logistics Processes through data analytics.
- ✓ Engage and develop a data based software for our customers based on a free trial.



DATA ANALYSIS

Information Gathered:

1. Neighborhoods in Toronto — Wikipedia.
2. Get geological location by address name.
3. Census data to analyze population density and average income to segment objective population.
4. Foursquare API to get the most common venues of given Borough of Toronto.
5. Using Foursquare API to get the venues' record of given venues of Toronto.
6. Narrow location area and specify



METHODOLOGY

- Scrape Neighborhoods in Toronto — Wikipedia transform it into a pandas data frame, longitude and latitude from Folium.
- To brief the project, I choose only to analyze the boroughs that contain the word 'Toronto'

	Postal Code	Borough	Neighborhood	Latitude	Longitude
0	M1B	Scarborough	Malvern, Rouge	43.806686	-79.194353
1	M1C	Scarborough	Rouge Hill, Port Union, Highland Creek	43.784535	-79.160497
2	M1E	Scarborough	Guildwood, Morningside, West Hill	43.763573	-79.188711
3	M1G	Scarborough	Woburn	43.770992	-79.216917
4	M1H	Scarborough	Cedarbrae	43.773136	-79.239476

METHODOLOGY

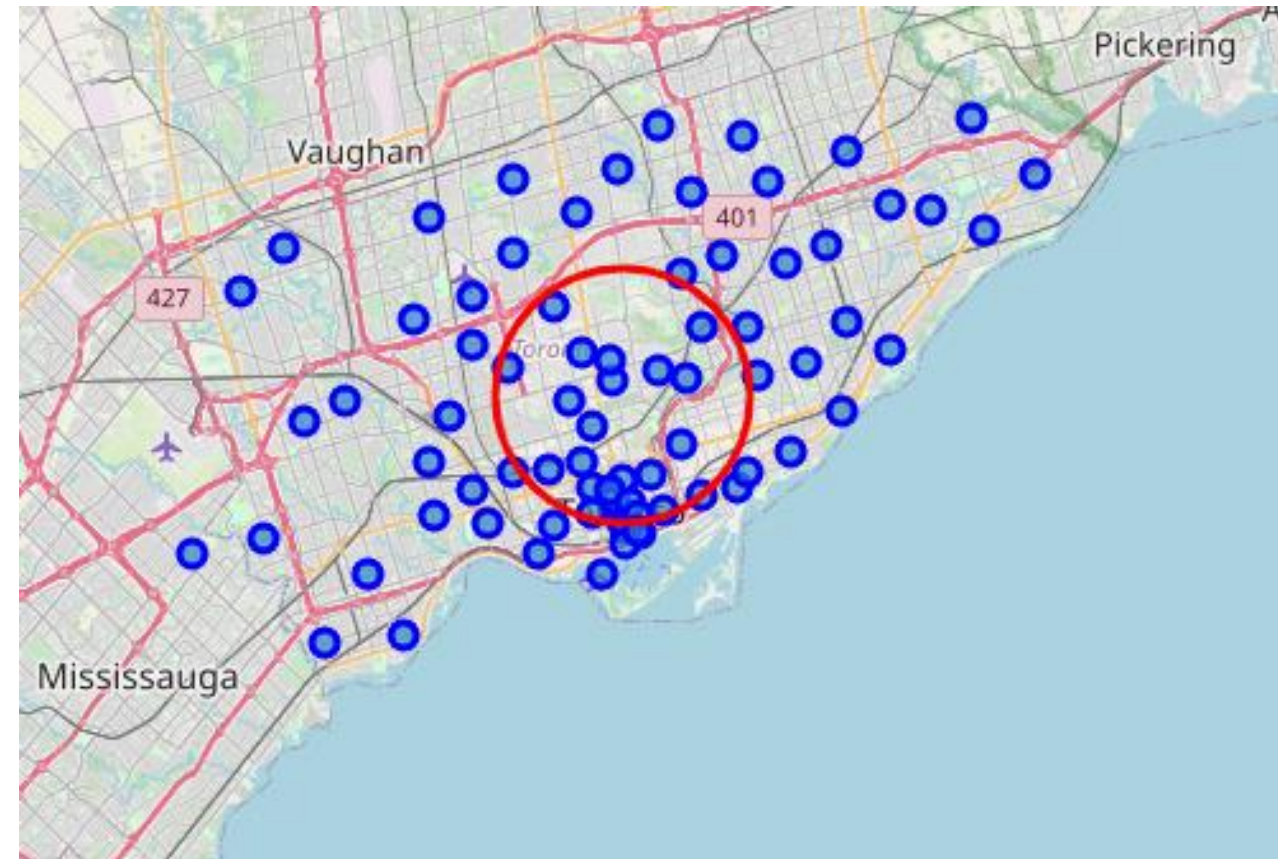
- Income and population data from Canada 2016 census.
- <https://www12.statcan.gc.ca/census-recensement/2016/as-sa/fogs-spg/Facts-can-eng.cfm?Lang=Eng&GK=CAN&GC=01&TOPIC=1>

#	Postal Code	AfterTaxIncome2015	Population_2016_x	Borough	Neighborhood_x	Latitude_x	Longitude_x
92 66	M2P	115237.0	7843.0	North York	York Mills West	43.752758	-79.400049
47 55	M5M	111821.0	25975.0	North York	Bedford Park, Lawrence Manor East	43.733283	-79.419750
78 61	M4N	109841.0	15330.0	Central Toronto	Lawrence Park	43.728020	-79.388790
46 74	M5R	108271.0	26496.0	Central Toronto	The Annex, North Midtown, Yorkville	43.672710	-79.405678
88 98	M8X	97210.0	10787.0	Etobicoke	The Kingsway, Montgomery Road, Old Mill North	43.653654	-79.506944

- Foursquare api, to collect the venues in Toronto.
- Cluster and segment the venues and rank them for most common in each borough.
- Folium to visualize the distribution and best area for our distribution center by K-Mean.

RESULTS

- Downtown and central Toronto higher venues density
- Evidence of a higher income, higher population in the area.
- Homogeneous distribution of most common venues in the different areas through Silhouette analysis.
- Target area allows to cover a higher percentage of customers within same distance.
- Deeper analysis to be held to get clear picture of costs, customers and distances.



CONCLUSION

- Several tools were used to reach a final target area
- Scraping data and picking the information for data analysis allows to get further insights that might not be that straight forward on the naked eye
- Some correlations appeared when doing the analysis but it was difficult to assess it, while further investigation needs to be done
- Overall, the course objectives were achieve and happy to reach this point!
- THANK YOU FOR READING

