Battle of the Neighborhood: Vcare & Uplay

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Business Requirement

To open a modern-day care center in Toronto/Ottawa neighborhoods.

Will not be a traditional day care

Is targeted for kids between 0-4 years only.

Targeted for young mothers who needs to relax ☺

Short term services of hourly or day service only.

Data Sources

Neighborhood Information from Wiki:

https://en.wikipedia.org/wiki/List_of_postal_codes_of_Canada:_M

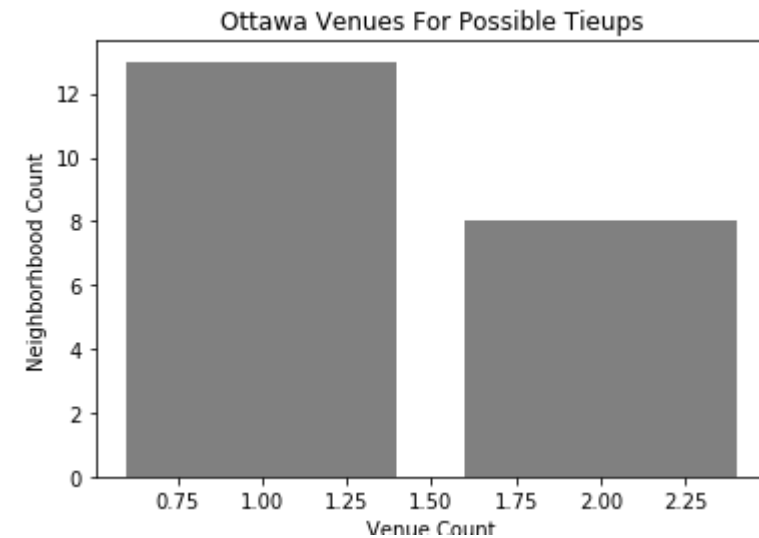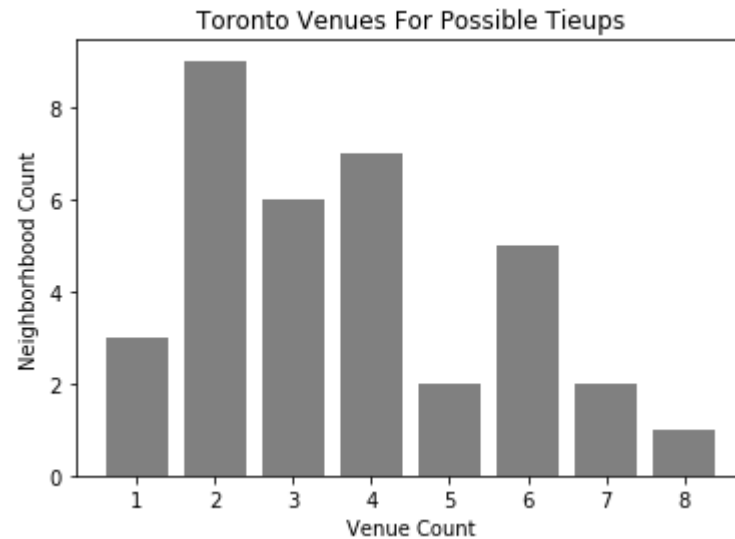https://en.wikipedia.org/wiki/List_of_postal_codes_of_Canada:_K
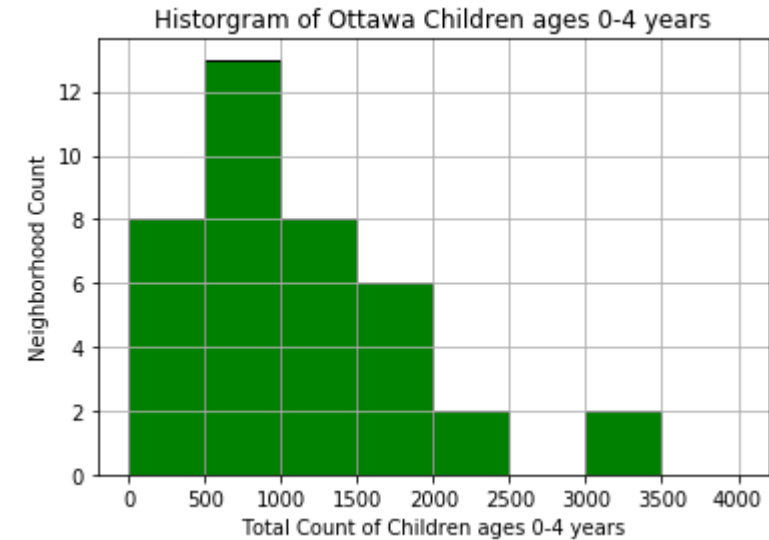
Census Data source

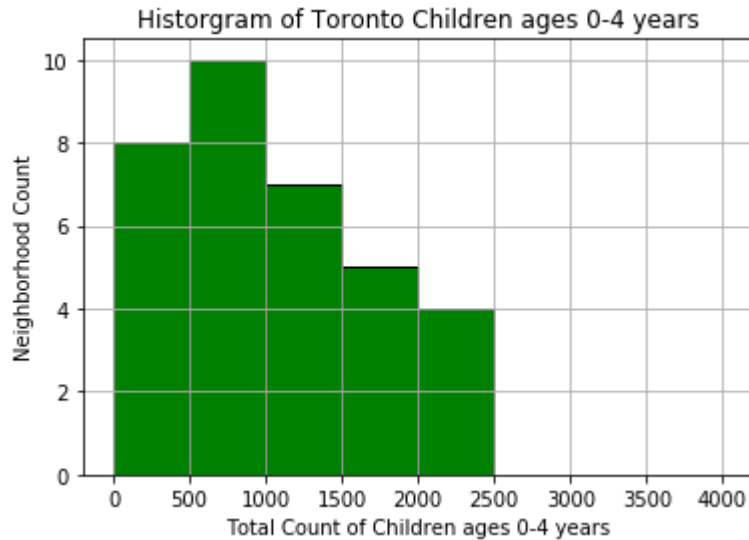https://www12.statcan.gc.ca/census-recensement/2016/dp-pd/prof/index.cfm?Lang=E

Venues Data source

Foursquare API
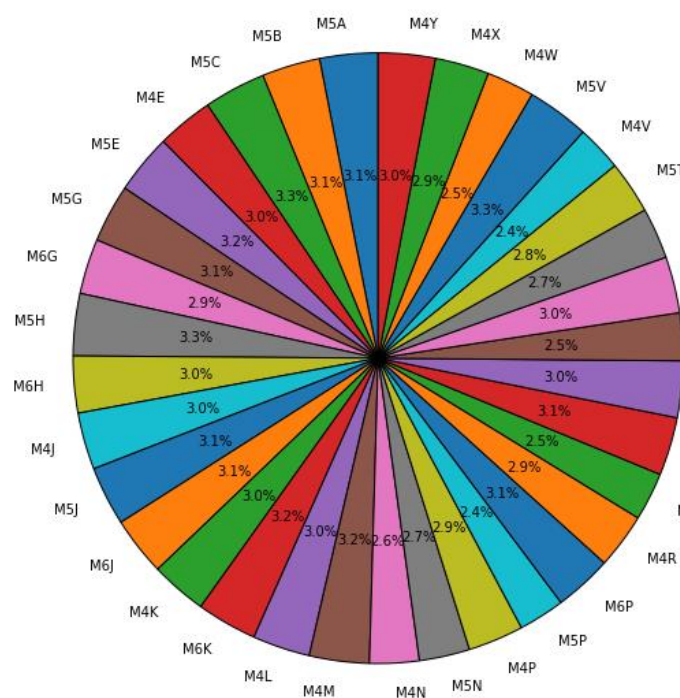
Venue Count Analysis for Toronto & Ottawa

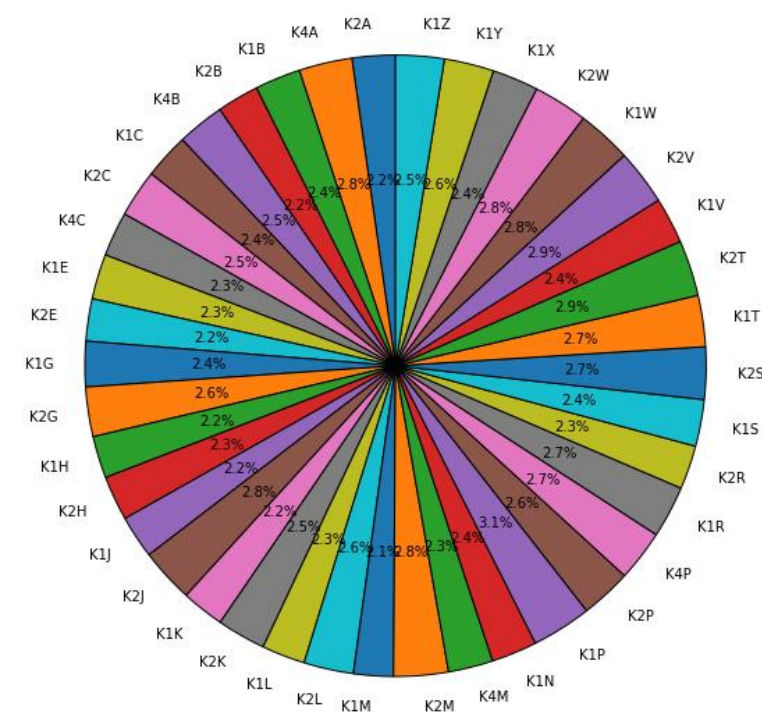# Child Density Analysis for Toronto & Ottawa

Income Profile Analysis for Toronto&Ottawa

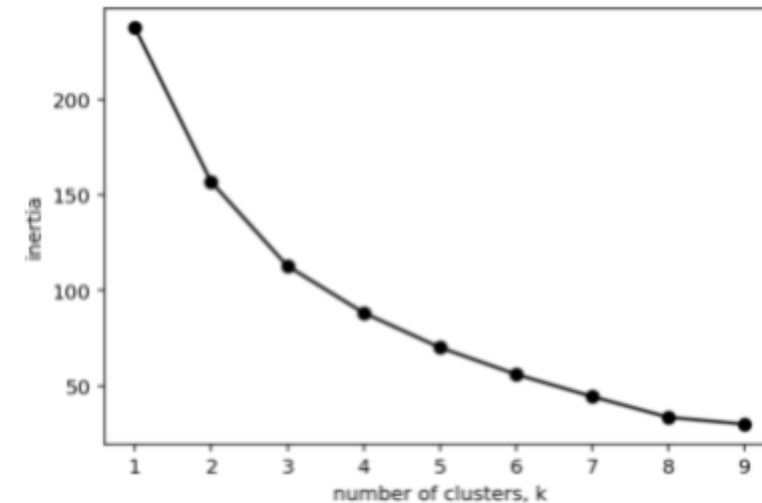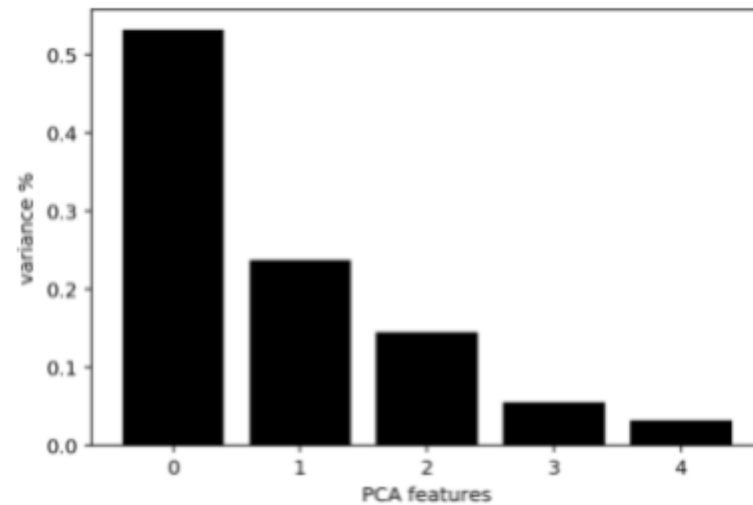Toronto Borough Income Percentage Chart

Ottawa Borough Income Percentage Chart

Machine Learning Algorithm – K-Means

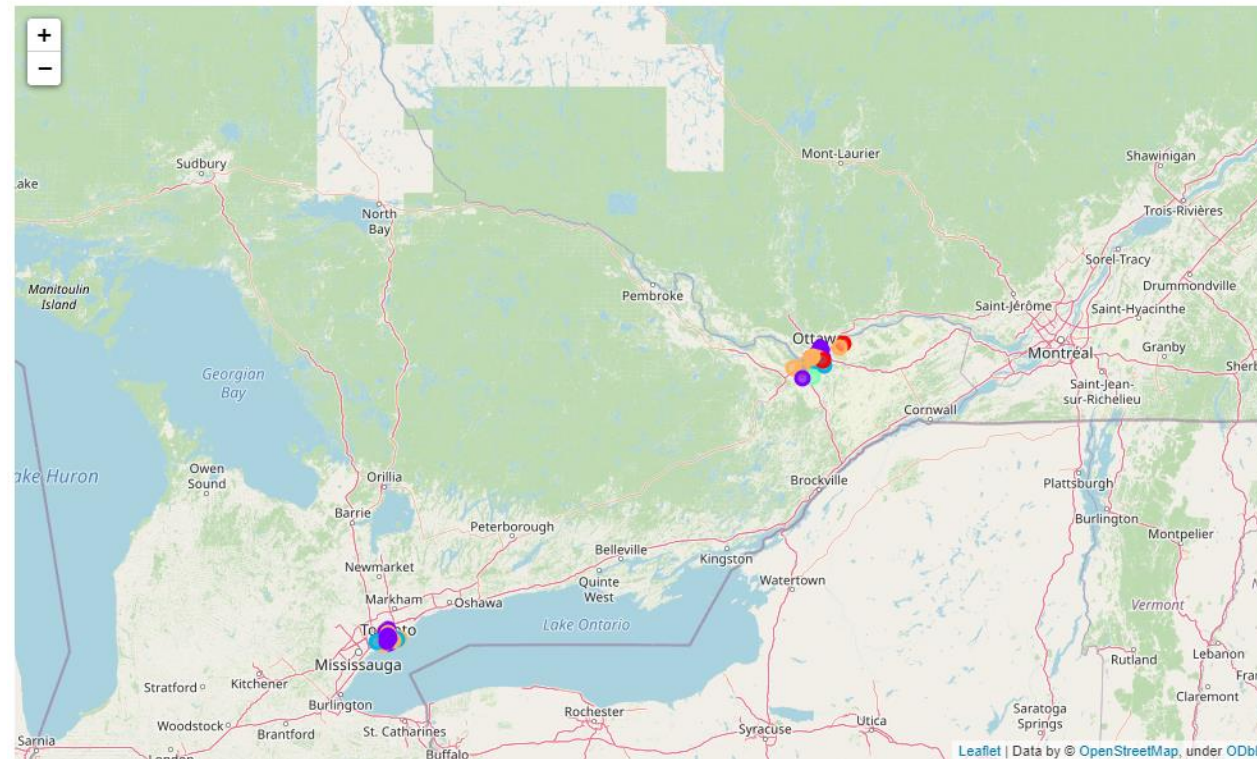As we are using multiple variables, K-means clustering algorithm will be the best approach to find groups which have not been explicitly labeled in the data. This can be used to confirm business assumptions about what types of groups exist or to identify unknown groups in complex data sets.

```
[0.53191579 0.23657486 0.14431731 0.0551395  0.03205255]
['CFamilySize', 'Income%', 'VenueCount', 'ChildCount', 'CFamilySize']
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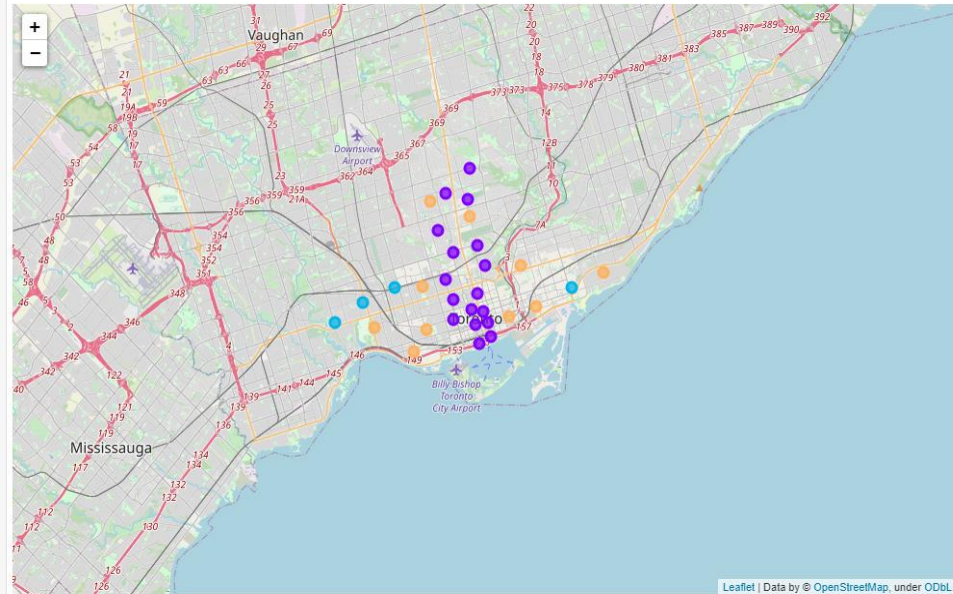
Ontario Map showing Clusters for both Neighborhoods

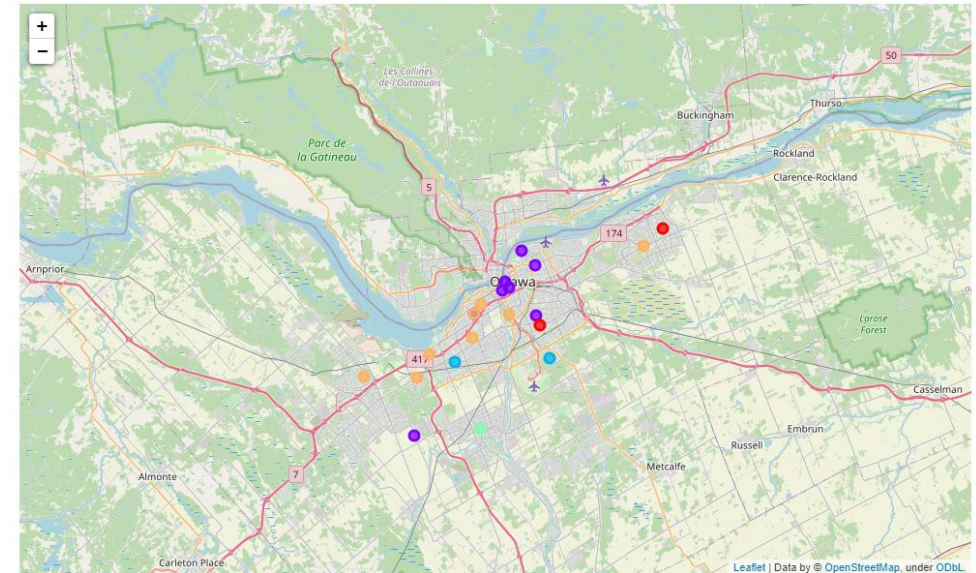The geograpical coordinate of Ontario, Canada are 50.000678, -86.000977.

Toronto & Ontario Neighborhood Maps

The geograpical coordinate of Toronto, Ontario are 43.6534817, -79.3839347.

The geograpical coordinate of Ottawa, Ontario are 45.421106, -75.690308.

Results & Conclusion

RESULT OF KMEANS CLUSTER – PROVIDES
CLUSTER #3 AS THE BEST CHOICE

	Borough	Neighborhood	Latitude	Longitude	Income%	ChildCount	CFamily Size	LPFamily Size	VenueCount	ClusterLabels
11	Ottawa	Centrepointe, Meadowlands, City View, Craig He...	45.340900	-75.772500	74.6	2370.0	4.0	2.7	2.0	2
31	Ottawa	Blossom Park, Greenboro, Leitrim, Findlay Creek	45.344300	-75.637600	77.1	2400.0	4.2	2.9	1.0	2
50	West Toronto	Dufferin, Dovercourt Village	43.669005	-79.442259	80.2	1970.0	3.9	2.6	2.0	2
75	East Toronto	India Bazaar, The Beaches West	43.668999	-79.315572	81.3	2260.0	3.9	2.6	2.0	2
104	West Toronto	High Park, The Junction South	43.661608	-79.464763	81.9	2210.0	3.8	2.5	4.0	2
122	West Toronto	Runnymede, Swansea	43.651571	-79.484450	79.5	2175.0	3.8	2.6	3.0	2

CONCLUSION

Of cluster# 3, the best suited neighborhood for the daycare is HighPark, The Junction South in East Toronto and for Ottawa borough, the option will be Centrepointe, Meadowlands, City View, Craig Henry, Tangelwood, Grenfell Glen, Davidson Heights.

Thank you