

OPENING A VEGETARIAN GOURMET RESTAURANT IN TORONTO

Christine Brachthäuser

INTRODUCTION

- Growing trend towards high quality, ecologically sound food
- Rising appreciation of a pleasant dining culture
- Green ideas and lifestyles are increasingly becoming mainstream
- Vegetarian cuisine today is sophisticated and splendid
- Great opportunities for a vegetarian gourmet restaurant

VEGETARIAN GOURMET RESTAURANTS IN TORONTO

	name	categories	lat	lng	address
0	Planta Yorkville	Vegetarian / Vegan Restaurant	43.670213	-79.389512	1221 Bay Street
1	Gourmet Malaysia 膳園	Vegetarian / Vegan Restaurant	43.788118	-79.266678	4466 Sheppard Ave. E Unit 101
2	Anglr	Vegetarian / Vegan Restaurant	43.669296	-79.336106	1054 1/2, Gerrard St E

LOCATION MATTERS

What are the main target groups and where to find them?

How well does the planned restaurant and the local business environment fit together?

DATA USED

- Toronto Census Data,

available at: <https://open.toronto.ca/dataset/neighborhood-profiles/>

- Foursquare Global Database

access via PLACES API

SELECTED DATA FROM THE CENSUS DATA SET

	Population, 2016	Population Change (%)	Higher Education	Higher Education (%)	Average Income (\$)	Average Retirement Income (\$)
Neighborhood						
Agincourt North	29113	-3.9	10985	37.73	26955	18482
Agincourt South-Malvern West	23757	8.0	10285	43.29	27928	18200
Alderwood	12054	1.3	5300	43.97	39159	18562
Annex	30526	4.6	20430	66.93	80138	42918
Banbury-Don Mills	27695	2.9	15950	57.59	51874	29704

GEODATA

Latitude and Longitude
Values for all 140
Neighborhoods
retrieved with
Geocoder.

	Neighborhood	Latitude	Longitude
0	Agincourt North	43.80930	-79.26707
1	Agincourt South-Malvern West	43.78736	-79.26935
2	Alderwood	43.60496	-79.54116
3	Annex	43.66936	-79.40280
4	Banbury-Don Mills	43.74041	-79.34852
...
135	Wychwood	43.67734	-79.42497
136	Yonge-Eglinton	43.70572	-79.40322
137	Yonge-St. Clair	43.68883	-79.39887
138	York University Heights	43.75997	-79.48520
139	Yorkdale-Glen Park	43.71388	-79.45469

VENUE SEARCH

```
In [61]: print(toronto_venues.shape)
toronto_venues.head()
```

(8792, 7)

Out[61]:

	Neighborhood	Neighborhood Latitude	Neighborhood Longitude	Venue	Venue Latitude	Venue Longitude	Venue Category
0	Agincourt North	43.8093	-79.26707	Saravanaa Bhavan South Indian Restaurant	43.810117	-79.269275	Indian Restaurant
1	Agincourt North	43.8093	-79.26707	Fahmee Bakery & Jamaican Foods	43.810170	-79.280113	Caribbean Restaurant
2	Agincourt North	43.8093	-79.26707	Subway	43.809372	-79.269474	Sandwich Place
3	Agincourt North	43.8093	-79.26707	RBC Royal Bank	43.808757	-79.269280	Bank
4	Agincourt North	43.8093	-79.26707	Samosa King - Embassy Restaurant	43.810152	-79.257316	Indian Restaurant

NEWLY CREATED MERGED DATAFRAME USED FOR CLUSTER ANALYSIS

	Pop.	Pop. Change (%)	Higher Education	Higher Education (%)	Av. Income (\$)	Av. Ret. Income (\$)	Inc. above \$30000	Inc. above \$30000 (%)	Pop. 30- 70 years	Pop. 30-70 years (%)	Venues	Rests	Vegy Rests	Compl. Venues	Gyms
Agincourt North	29113	-3.9	10985	37.73	26955	18482	7995	33.0	15425	54.0	41	14.0	0.0	0.0	0.0
Agincourt South- Malvern West	23757	8.0	10285	43.29	27928	18200	6990	38.0	12530	53.0	65	28.0	0.0	0.0	3.0
Alderwood	12054	1.3	5300	43.97	39159	18562	5390	53.0	6950	59.0	68	10.0	0.0	1.0	1.0
Annex	30526	4.6	20430	66.93	80138	42918	14935	58.0	15885	54.0	100	28.0	3.0	3.0	1.0
Banbury-Don Mills	27695	2.9	15950	57.59	51874	29704	13075	59.0	14650	53.0	45	15.0	0.0	1.0	1.0

OVERVIEW OF CLUSTERS

	Pop.	Pop. Change (%)	Higher Education	Higher Education (%)	Inc. above \$30000	Inc. above \$30000 (%)	Pop. 30-70 years	Pop. 30-70 years (%)	Venues	Rests	Vegy Rests	Compl. Venues	Gyms
Labels													
0	13685.722222	2.650000	6631.388889	48.741111	5533.333333	50.555556	7295.833333	53.777778	32.222222	4.666667	0.055556	0.277778	0.722222
1	30404.416667	17.941667	19662.083333	64.821667	14199.166667	55.666667	17036.666667	56.500000	92.166667	24.250000	0.666667	2.333333	1.500000
2	15018.142857	4.100000	7940.714286	53.607143	5745.714286	45.857143	8095.000000	52.714286	100.000000	31.428571	3.428571	2.714286	0.857143
3	18202.454545	1.590909	10423.181818	57.360909	8748.636364	61.727273	9941.818182	54.818182	56.000000	13.727273	0.181818	0.818182	0.454545
4	65913.000000	52.000000	51740.000000	78.500000	40350.000000	66.000000	35765.000000	54.000000	100.000000	19.000000	1.000000	4.000000	2.000000
5	32183.904762	1.195238	13649.523810	42.616190	10011.904762	39.714286	16701.190476	51.714286	48.714286	12.904762	0.142857	0.095238	0.476190
6	16524.720000	0.800000	5750.200000	35.206000	4584.600000	37.480000	8371.000000	50.920000	35.560000	7.120000	0.000000	0.120000	0.320000
7	13866.444444	1.118519	6938.333333	49.827037	5278.703704	47.740741	7862.592593	57.074074	88.925926	24.407407	0.296296	1.000000	0.555556
8	18505.000000	9.770000	9509.500000	52.354000	6650.500000	45.500000	9992.500000	53.300000	70.400000	19.200000	0.000000	0.000000	2.400000
9	12585.500000	3.937500	8278.750000	65.477500	6845.625000	66.625000	6730.000000	53.375000	84.125000	23.125000	0.875000	2.000000	1.750000

CLUSTER 4

	Pop.	Pop. Change (%)	Higher Education	Higher Education (%)	Av. Income (\$)	Av. Ret. Income (\$)	Inc. above \$30000	Inc. above \$30000 (%)	Pop. 30- 70 years	Pop. 30-70 years (%)	Venues	Rests	Vegy Rests	Compl. Venues	Gyms	Labels
Waterfront Communities-The Island	65913	52.0	51740	78.5	54292	28481	40350	66.0	35765	54.0	100	19.0	1.0	4.0	2.0	4

CLUSTER 2

	Pop.	Pop. Change (%)	Higher Education	Higher Education (%)	Av. Income (\$)	Av. Ret. Income (\$)	Inc. above \$30000	Inc. above \$30000 (%)	Pop. 30- 70 years	Pop. 30-70 years (%)	Venues	Rests	Vegy Rests	Compl. Venues	Gyms	Labels
Dufferin Grove	11785	2.9	6150	52.18	34403	14578	4780	47.0	6875	58.0	100	33.0	3.0	0.0	0.0	2
Kensington- Chinatown	17945	-3.0	9095	50.68	31282	18243	5650	36.0	8545	47.0	100	25.0	2.0	5.0	2.0	2
Little Portugal	15559	29.1	8490	54.57	37924	13591	6925	51.0	8505	54.0	100	38.0	4.0	1.0	1.0	2
Palmerston- Little Italy	13826	0.6	8280	59.89	46199	17508	6225	52.0	7290	51.0	100	33.0	4.0	1.0	0.0	2
South Parkdale	21849	2.8	11020	50.44	30293	11962	7190	40.0	12875	59.0	100	33.0	3.0	2.0	2.0	2
Trinity- Bellwoods	16556	-1.5	8090	48.86	40658	17750	6665	48.0	9165	56.0	100	29.0	3.0	4.0	0.0	2
University	7607	-2.2	4460	58.63	40931	26958	2785	47.0	3410	44.0	100	29.0	5.0	6.0	1.0	2

CLUSTER 9

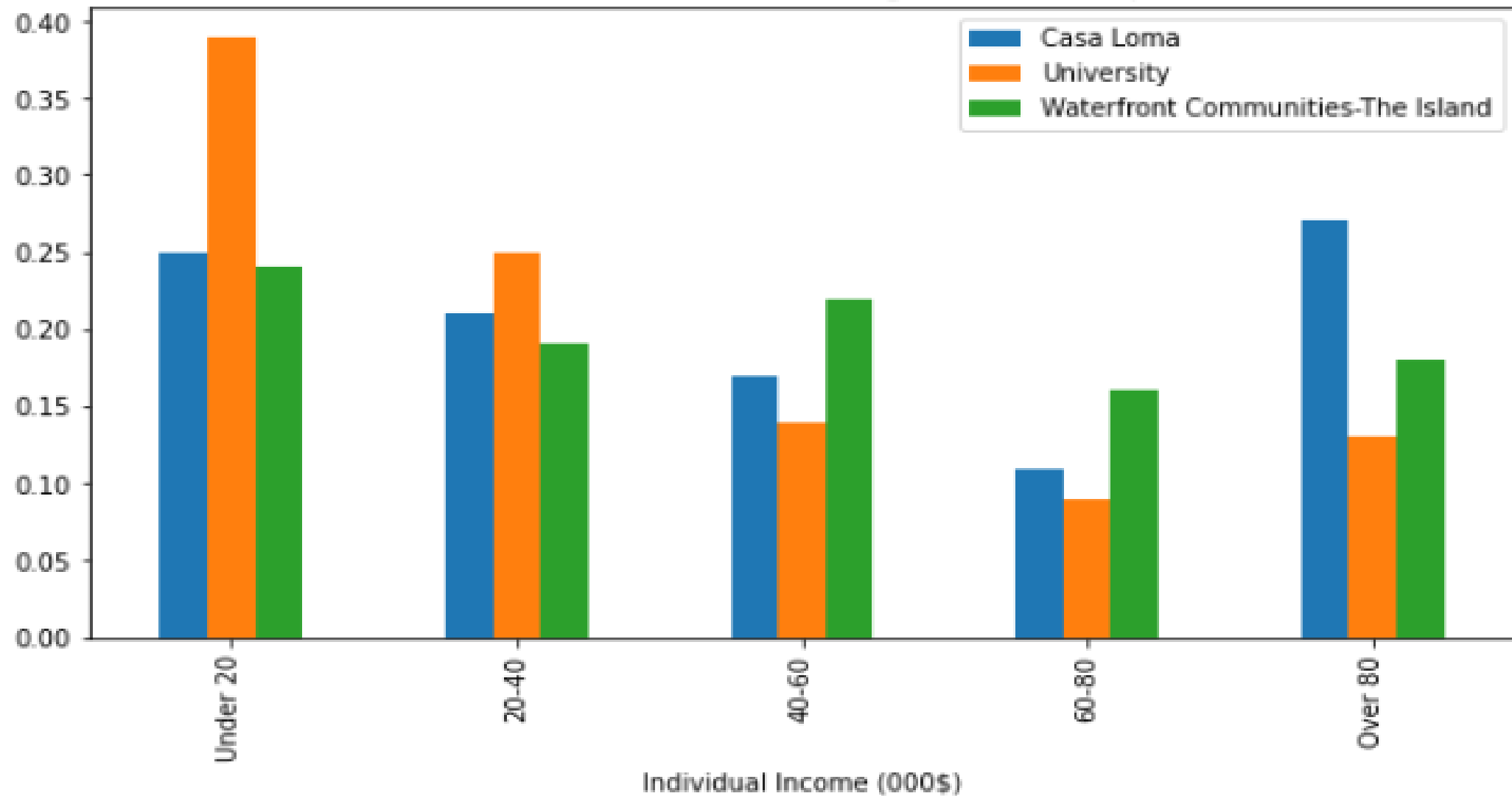
	Pop.	Pop. Change (%)	Higher Education	Higher Education (%)	Av. Income (\$)	Av. Ret. Income (\$)	Inc. above \$30000	Inc. above \$30000 (%)	Pop. 30-70 years	Pop. 30-70 years (%)	Venues	Rests	Vegy Rests	Compl. Venues	Gyms	Labels
Bridle Path- Sunnybrook- York Mills	9266	6.3	5635	60.81	193454	55725	4805	66.0	4770	53.0	15	1.0	0.0	0.0	2.0	9
Casa Loma	10968	4.6	7460	68.02	115033	39286	6025	65.0	5875	53.0	100	34.0	2.0	3.0	1.0	9
Forest Hill South	10732	-1.8	6990	65.13	142627	47658	5960	67.0	5720	53.0	90	21.0	1.0	1.0	2.0	9
Kingsway South	9271	1.1	5735	61.86	97836	40836	5060	70.0	4885	52.0	85	23.0	0.0	1.0	1.0	9
Lawrence Park South	15179	0.7	9510	62.65	111586	44390	7780	67.0	7945	53.0	100	19.0	1.0	2.0	2.0	9
Rosedale- Moore Park	20923	1.4	14090	67.34	134865	47811	11730	67.0	11170	53.0	100	24.0	0.0	5.0	2.0	9
Yonge- Eglinton	11817	11.7	7990	67.61	65356	36438	6075	63.0	6555	55.0	83	26.0	1.0	2.0	3.0	9
Yonge- St.Clair	12528	7.5	8820	70.40	80555	48170	7330	68.0	6920	55.0	100	37.0	2.0	2.0	1.0	9

PLAUSIBILITY CHECK

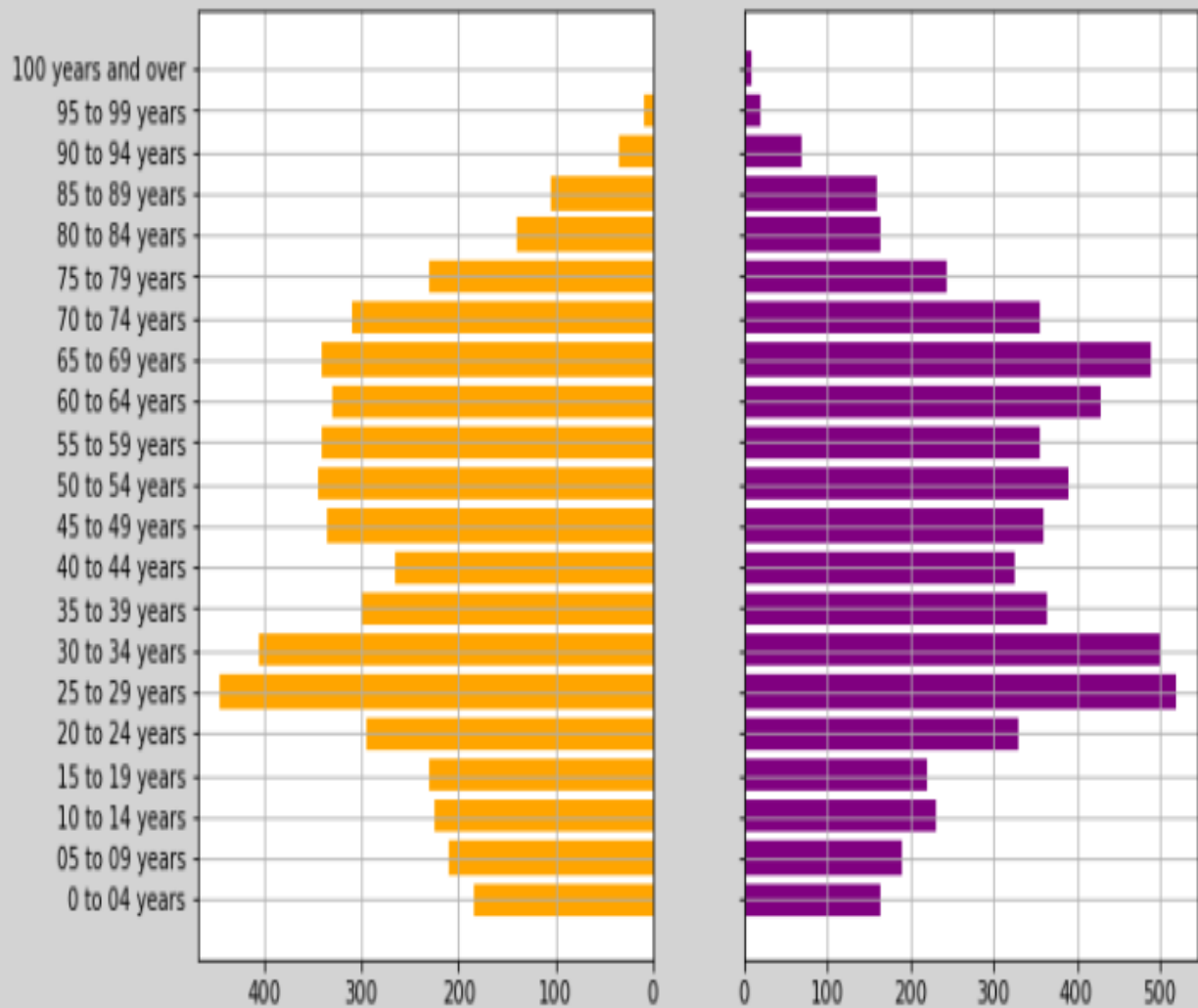
Comparing Income and Age Distribution

- Waterfront Communities – The Island
- Casa Loma
- University

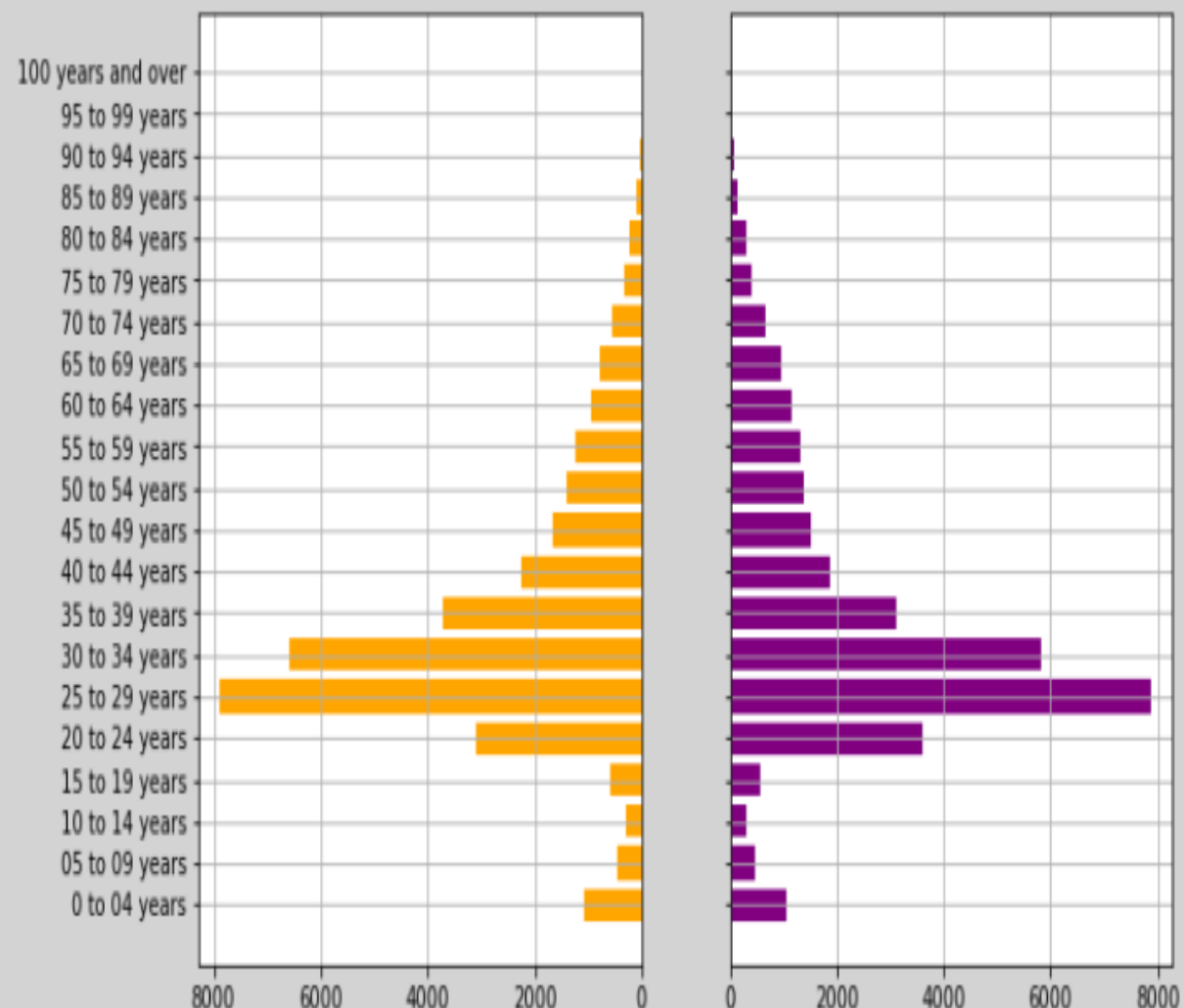
Distribution of Income (in %) - Neighborhood Comparison



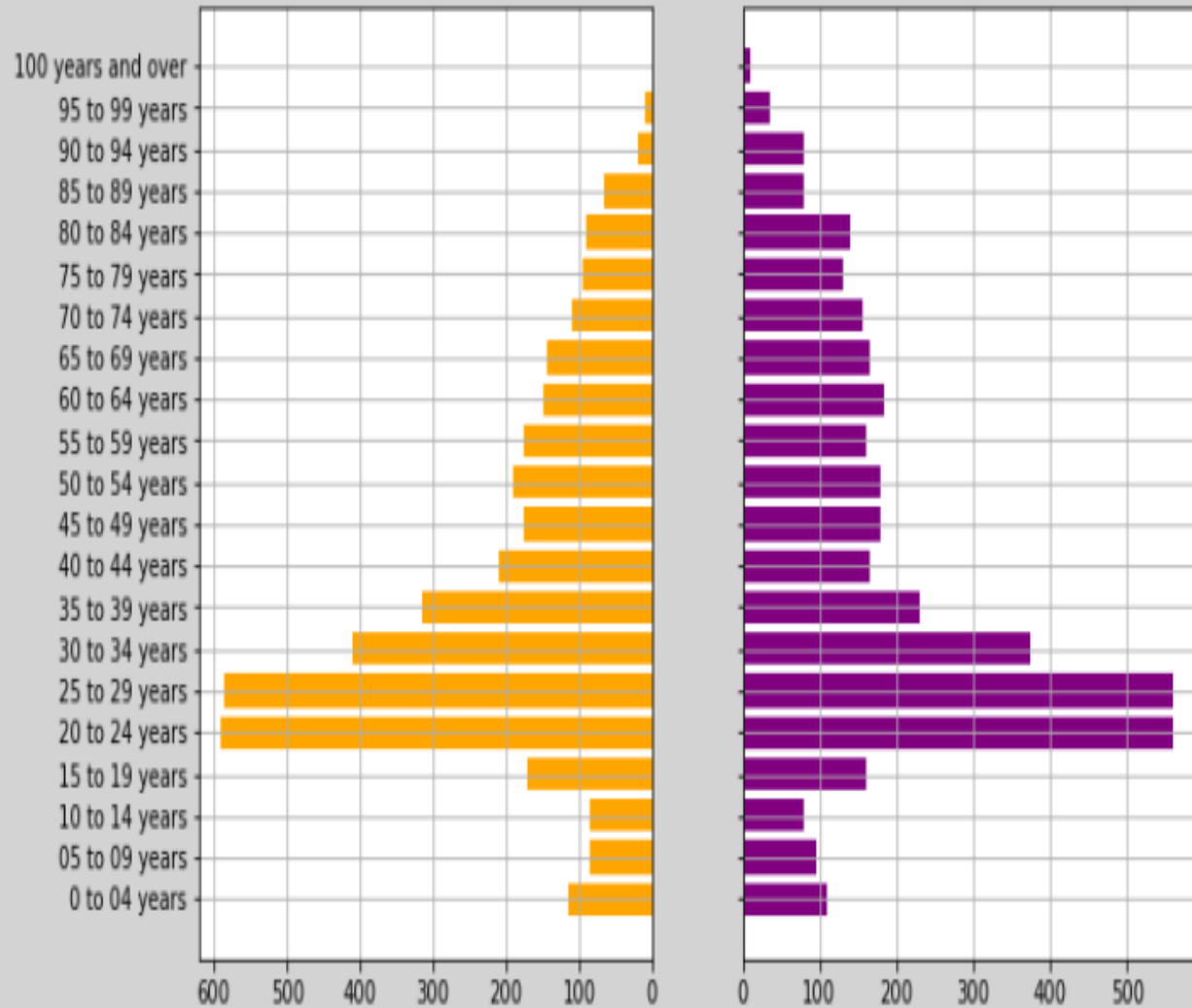
Males Population - Casa Loma Females



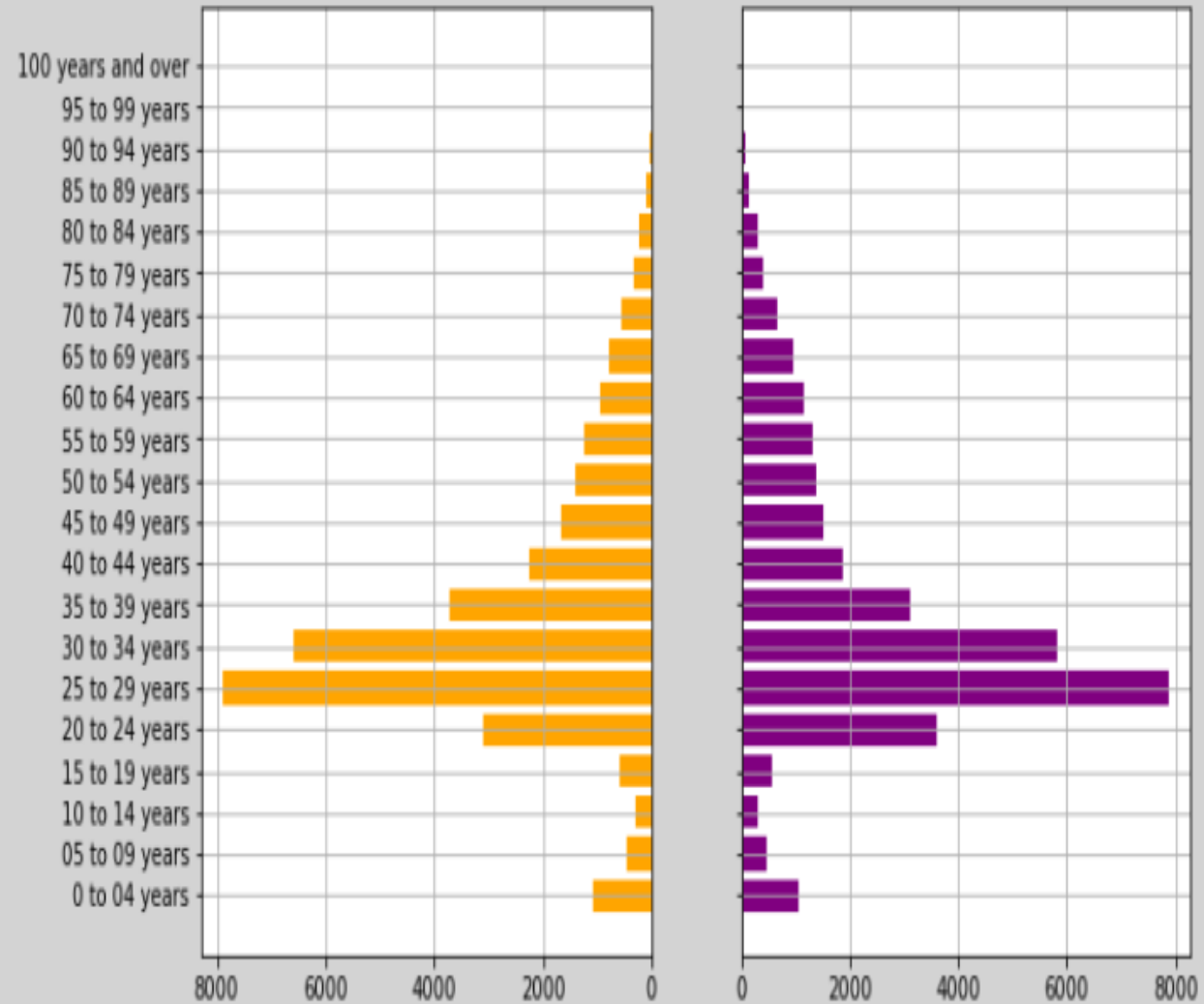
Males Population - Waterfront Females



Males Population - University Females



Males Population - Waterfront Females



CONCLUSION

- Waterfront Communities – The Island a reasonable choice
- Cluster analysis as a selection device for business location suitable
- Framework flexible enough to include further selection criteria for a truly comprehensive analysis