

OPENING A VEGETARIAN GOURMET RESTAURANT IN TORONTO

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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

Directly retrieved:

- Population 2016
- Population Change 2011-2016
- Postsecondary certificate, diploma or degree
- Private retirement income: Average amount (\$)
- After-tax income: Average amount (\$)

Specifically calculated:

- Personal Income above \$30000
- Personal Income above \$30000 (%)
- Population 30-70 years
- Population 30-70 years (%)

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

```
print('The search yielded {} venues altogether.'.format(toronto_venues.shape[0]))
toronto_venues.head()
```

The search yielded 8785 venues altogether.

	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	Menchie's	43.808338	-79.268288	Frozen Yogurt Shop
2	Agincourt North	43.8093	-79.26707	Fahmee Bakery & Jamaican Foods	43.810170	-79.280113	Caribbean Restaurant
3	Agincourt North	43.8093	-79.26707	Samosa King - Embassy Restaurant	43.810152	-79.257316	Indian Restaurant
4	Agincourt North	43.8093	-79.26707	Booster Juice	43.809915	-79.269382	Juice Bar

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

CLUSTER OVERVIEW

	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	13504.583333	1.433333	7620.000000	55.950000	5649.583333	51.916667	7936.666667	59.000000	96.916667	26.666667	0.250000	2.083333	0.666667
1	15263.892857	1.617857	5633.928571	37.444286	4629.107143	39.964286	7862.678571	51.750000	30.035714	5.357143	0.035714	0.142857	0.285714
2	33834.187500	0.900000	14157.187500	42.270000	10463.125000	39.687500	17361.562500	51.312500	37.625000	7.812500	0.000000	0.000000	0.375000
3	12585.500000	3.937500	8278.750000	65.477500	6845.625000	66.625000	6730.000000	53.375000	84.000000	24.000000	1.000000	2.250000	1.625000
4	65913.000000	52.000000	51740.000000	78.500000	40350.000000	66.000000	35765.000000	54.000000	100.000000	20.000000	1.000000	3.000000	3.000000
5	31335.615385	15.900000	19411.538462	62.090000	14421.153846	55.615385	17718.461538	57.076923	95.153846	24.307692	0.538462	1.615385	1.923077
6	15726.300000	4.820000	7901.000000	51.250000	5771.500000	45.000000	8452.500000	52.700000	97.500000	27.700000	2.000000	1.800000	0.900000
7	18301.380952	0.471429	7979.523810	43.360476	5680.952381	40.238095	9569.523810	52.571429	69.142857	20.095238	0.047619	0.238095	1.095238
8	15222.846154	9.169231	8144.615385	53.124615	6063.076923	50.384615	8461.538462	56.076923	74.307692	14.615385	0.000000	0.692308	1.461538
9	15962.833333	1.183333	8770.000000	54.908889	7345.000000	57.944444	8611.111111	53.944444	43.166667	9.888889	0.055556	0.500000	0.555556

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 6

	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
Clairlea-Birchmount	26984	8.9	11360	42.10	31369	16507	9055	45.0	14640	53.0	75	16.0	1.0	2.0	0.0	6
Dufferin Grove	11785	2.9	6150	52.18	34403	14578	4780	47.0	6875	58.0	100	29.0	2.0	1.0	0.0	6
Kensington-Chinatown	17945	-3.0	9095	50.68	31282	18243	5650	36.0	8545	47.0	100	26.0	2.0	2.0	1.0	6
Little Portugal	15559	29.1	8490	54.57	37924	13591	6925	51.0	8505	54.0	100	36.0	2.0	1.0	0.0	6
Palmerston-Little Italy	13826	0.6	8280	59.89	46199	17508	6225	52.0	7290	51.0	100	26.0	2.0	1.0	0.0	6
Regent Park	10803	8.0	4835	44.76	29525	17011	3025	35.0	5760	53.0	100	24.0	1.0	2.0	1.0	6
South Parkdale	21849	2.8	11020	50.44	30293	11962	7190	40.0	12875	59.0	100	32.0	2.0	0.0	3.0	6
Trinity-Bellwoods	16556	-1.5	8090	48.86	40658	17750	6665	48.0	9165	56.0	100	28.0	2.0	3.0	1.0	6
University	7607	-2.2	4460	58.63	40931	26958	2785	47.0	3410	44.0	100	27.0	5.0	4.0	2.0	6
Wychwood	14349	2.6	7230	50.39	43054	19513	5415	49.0	7460	52.0	100	33.0	1.0	2.0	1.0	6

CLUSTER 3

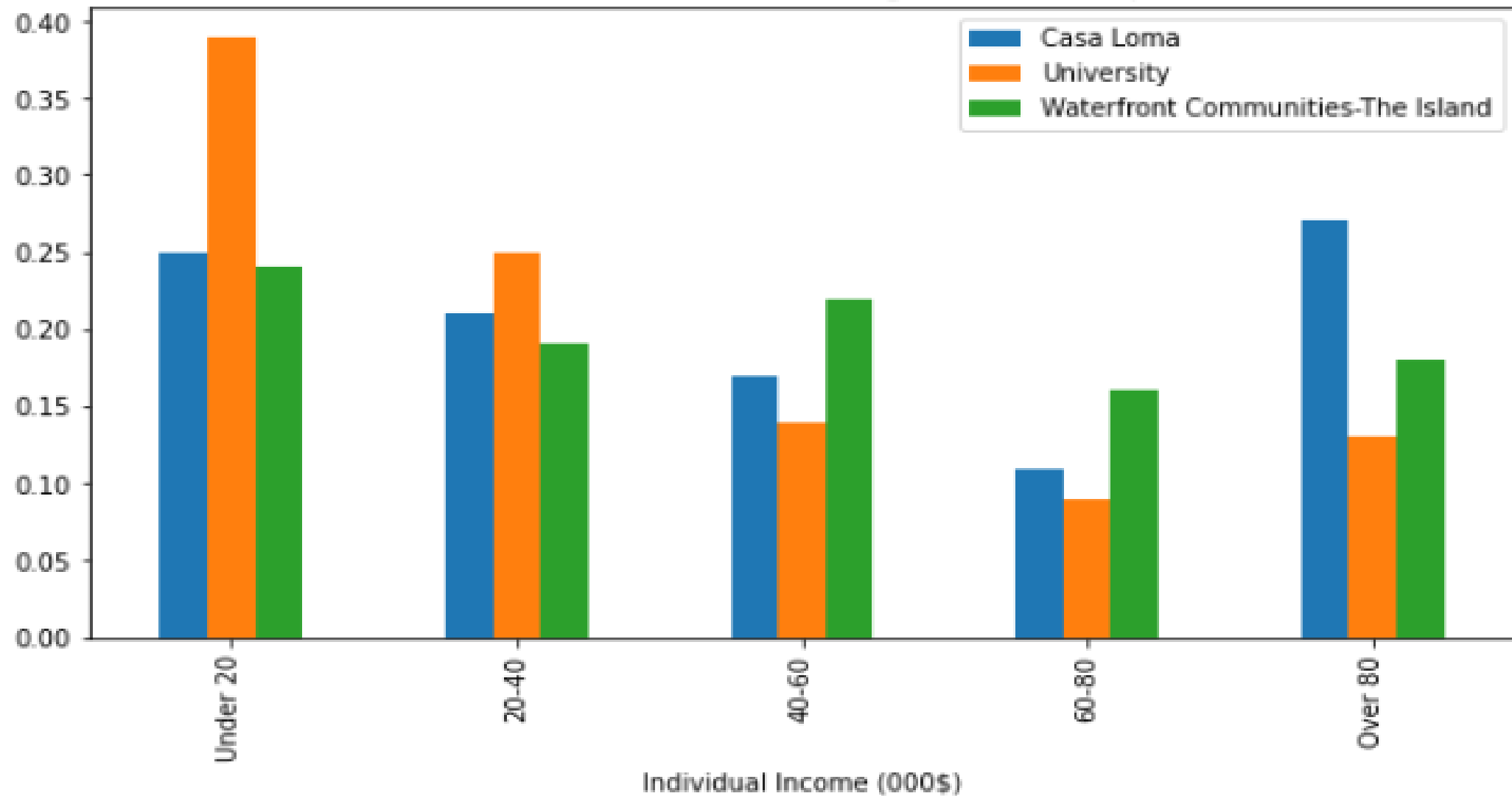
	Pop.	Pop. Change (%)	Higher Education	Higher Education (%)	Av. Income (\$)	Av. Ret. Income (\$)	Inc. above \$30000	Inc. above \$30000 (%)	Pop. 30-70 years	Pop. 30-70 years (%)	Venues	Rests	Vegy Rests	Compl. Venues	Gyms	Labels
Bridle Path- Sunnybrook- York Mills	9266	6.3	5635	60.81	193454	55725	4805	66.0	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

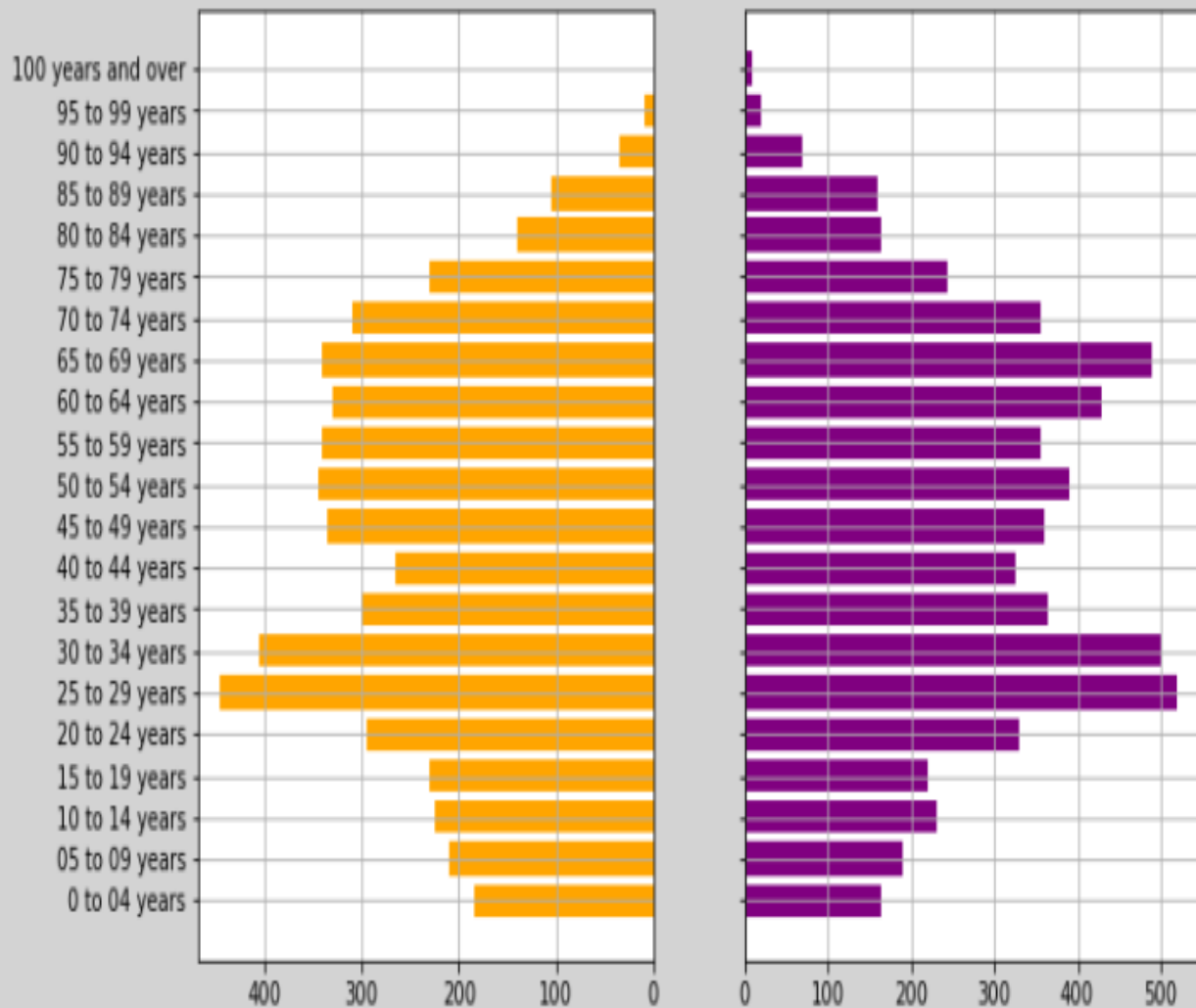
Comparing Income and Age Distribution

- Waterfront Communities – The Island
- Casa Loma
- University

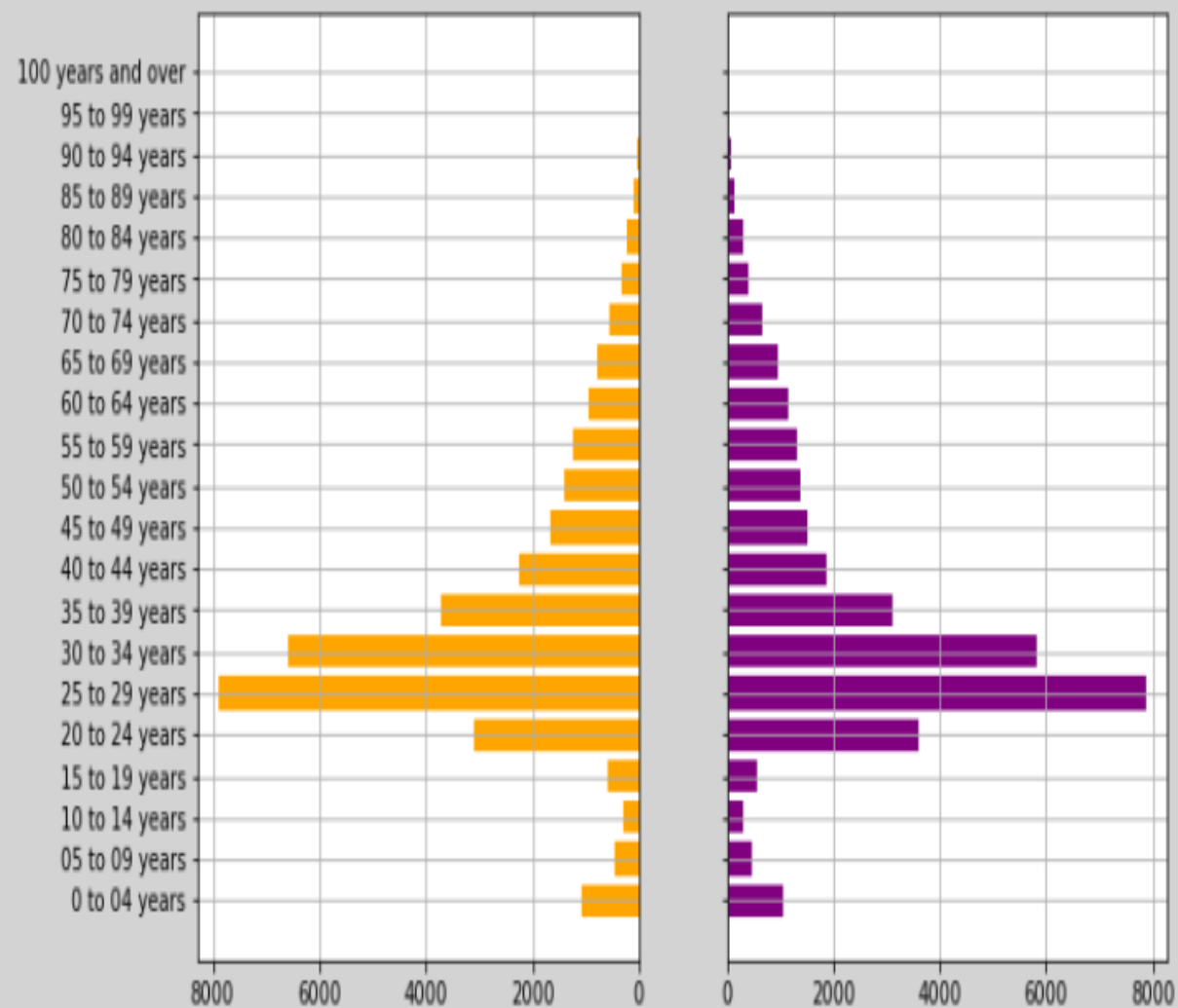
Distribution of Income (in %) - Neighborhood Comparison



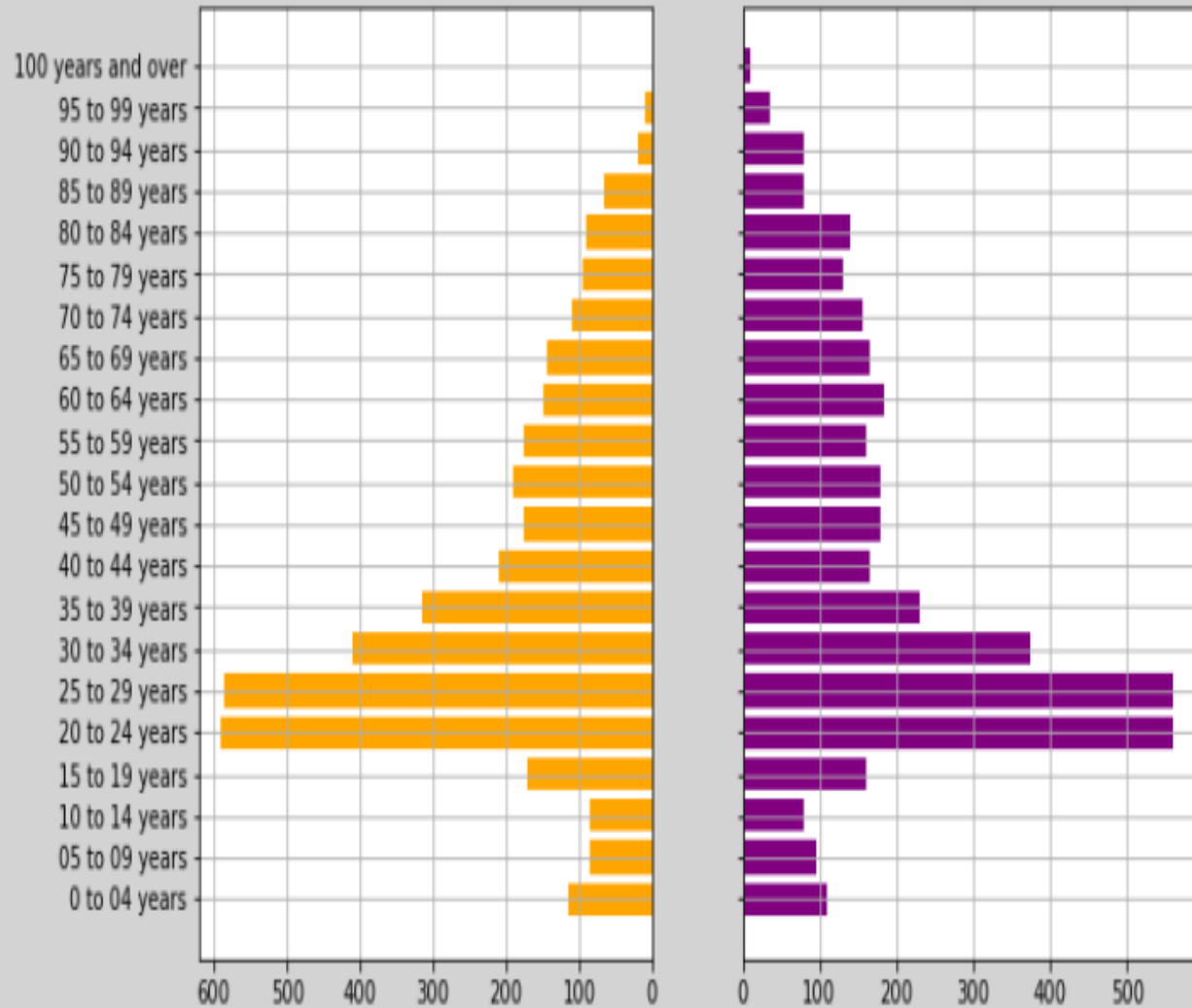
Males Population - Casa Loma Females



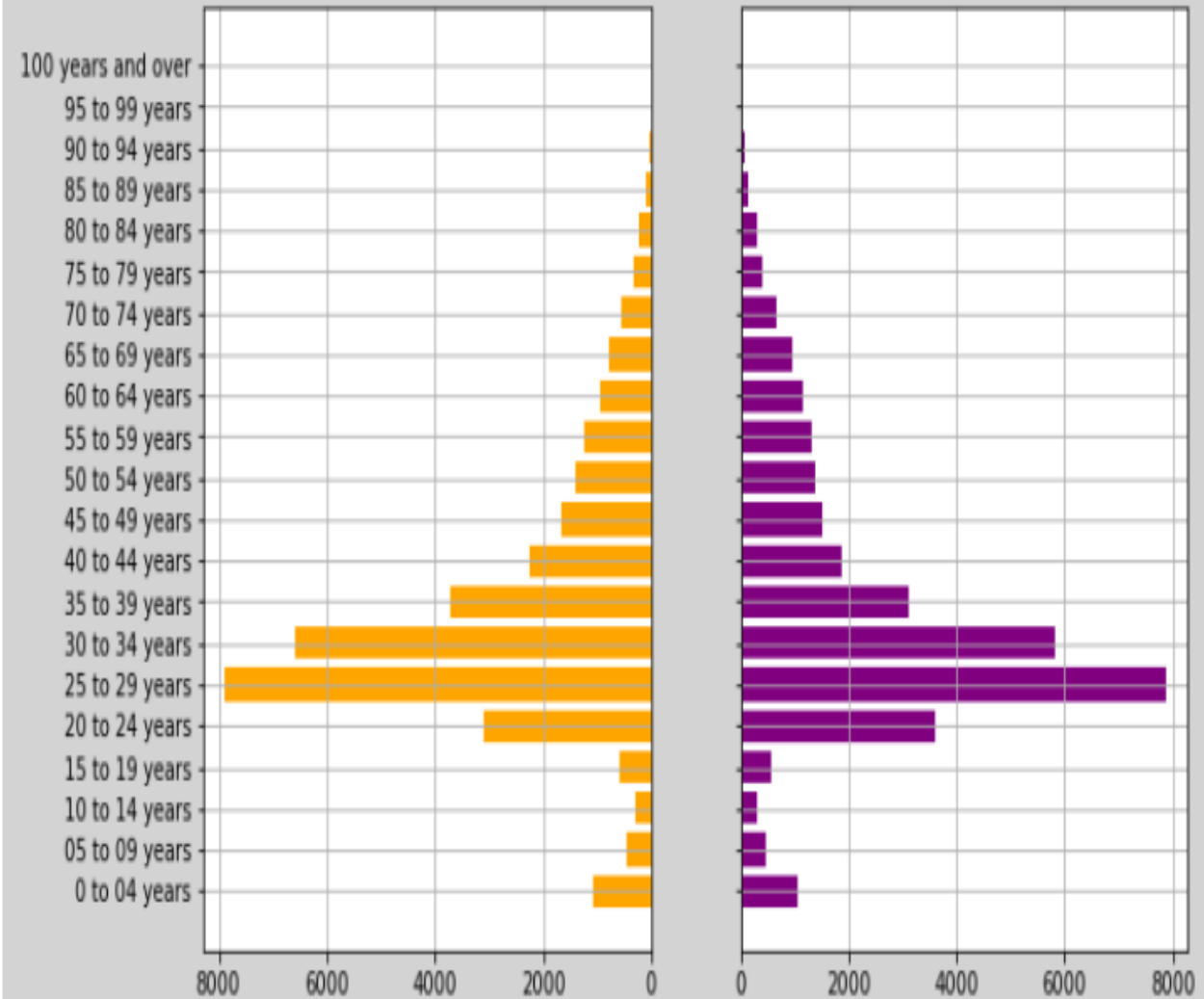
Males Population - Waterfront Females



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