

Location Decision Making for A Chinese Restaurant in Toronto

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BUSINESS PROBLEM

Are you looking for a place in Toronto to open a Chinese restaurant, where people can enjoy authentic Chinese food for a medium price? It will be a place for people who want to actually enjoy food and the atmosphere. Opening a restaurant can be a risky business in these years, therefore you want to be wise putting your investment by first making a smart decision of the location. This location analysis may be something for you.



Data

- Neighborhoods in Toronto: We will use the neighborhood information to retrieve their location and further venue information.
- Geographic Location Data: Combining these dataset with the above one, we will get the accurate locations of all the neighborhoods in Toronto, which is the foundation of making all the requests to Foursquare later on. For example, we need to get the venues information (eg. venue ID, venue categories, venue rating) for different neighborhoods.

	Postal Code	Borough	Neighbourhood
0	M3A	North York	Parkwoods
1	M4A	North York	Victoria Village
2	M5A	Downtown Toronto	Regent Park, Harbourfront
3	M6A	North York	Lawrence Manor, Lawrence Heights

	Neighborhood	Neighborhood Latitude	Neighborhood Longitude	Venue ID
0	Parkwoods	43.753259	-79.329656	4e8d9dcdd5fbbb6b3003c7b
1	Parkwoods	43.753259	-79.329656	4cb11e2075ebb60cd1c4caad
2	Victoria Village	43.725882	-79.315572	4c633acb86b6be9a61268e34
3	Victoria Village	43.725882	-79.315572	4f3ecce6e4b0587016b6f30d
4	Victoria Village	43.725882	-79.315572	4bbe904a85fbb713420d7167

METHODOLOGY

1

Venue Counts

Neighborhoods with few venues are eliminated as they do not have good foot traffic.

2

K-means Clustering

By clustering neighborhoods depending on venues in them, cluster(s) with business focus on restaurant are selected.

3

Consumer Base

We want to choose neighborhoods that already have some Asian restaurants.

4

Neighborhood Reputation

A good general reputation for restaurants in a certain area can be very beneficial for opening a new restaurant in the same area.

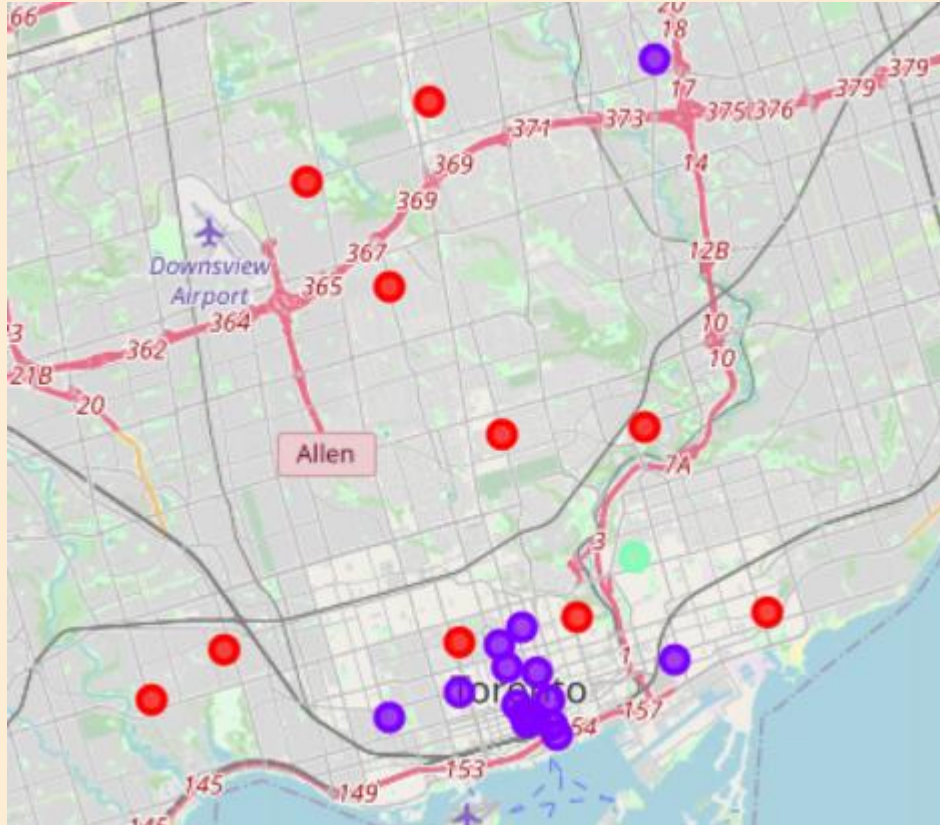
Venue Counts

94 → 31

63 Neighborhoods have less than 20 venues should not be considered anymore, as they do not generate enough foot traffic.

Neighborhood	Venue
Harbourfront East, Union Station, Toronto Islands	100
First Canadian Place, Underground city	100
Toronto Dominion Centre, Design Exchange	100
Commerce Court, Victoria Hotel	100
Garden District, Ryerson	100
Stn A PO Boxes	98
Richmond, Adelaide, King	97
St. James Town	81
Church and Wellesley	79
Fairview, Henry Farm, Oriole	68
Central Bay Street	62

K-means Clustering



▼ Clustering Output

		Postal Code	Borough	Neighbourhood	Latitude	Longitude
Cluster Labels						
●	0	10	10	10	10	10
●	1	15	15	15	15	15
●	2	1	1	1	1	1

◀ Visualization on Map

K-means Clustering

Cluster 0

- Number of Venues: 10
- Business Focus: Food
- Location: Toronto & York



Cluster 1

- Number of Venues: 15
- Business Focus: Coffee Shop
- Location: mostly at Downtown Toronto (expensive rent)



Cluster 2

- Number of Venues: 1
- Business Focus: Food
- Location: East Toronto



Choose the neighborhoods with the matching business function;
Avoid areas that have the highest rent in Toronto

Consumer Base

Neighborhoods without any Asian restaurant as the top 5 common venue are removed from the list, making the number of our potential neighborhood:

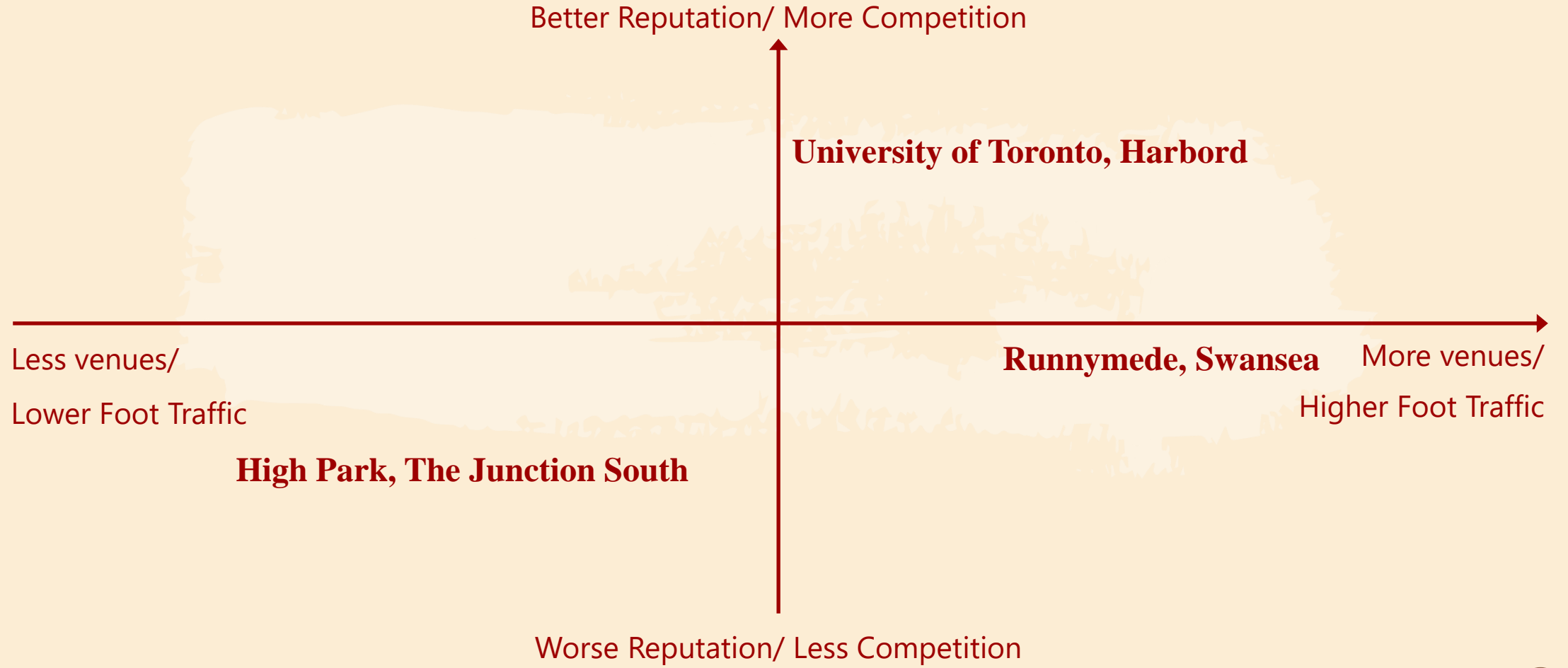
11 → 7

Neighborhood Reputation

	Neighbourhood	Restaurant Counts	Restaurant Avg. Rating	Postal Code	Borough	Latitude	Longitude	1st Most Common Venue	2nd Most Common Venue	3rd Most Common Venue	4th Most Common Venue	5th Most Common Venue
0	Bedford Park, Lawrence Manor East	9	6.855556	M5M	North York	43.733283	-79.419750	Sandwich Place	Italian Restaurant	Coffee Shop	Greek Restaurant	Thai Restaurant
1	High Park, The Junction South	7	7.071429	M6P	West Toronto	43.661608	-79.464763	Thai Restaurant	Café	Mexican Restaurant	Bakery	Fried Chicken Joint
2	India Bazaar, The Beaches West	5	6.780000	M4L	East Toronto	43.668999	-79.315572	Sandwich Place	Fast Food Restaurant	Park	Sushi Restaurant	Pet Store
3	Runnymede, Swansea	8	7.337500	M6S	West Toronto	43.651571	-79.484450	Café	Coffee Shop	Pizza Place	Diner	Sushi Restaurant
4	Thorncliffe Park	4	6.525000	M4H	East York	43.705369	-79.349372	Indian Restaurant	Sandwich Place	Yoga Studio	Supermarket	Gym
5	University of Toronto, Harbord	8	7.912500	M5S	Downtown Toronto	43.662696	-79.400049	Café	Italian Restaurant	Japanese Restaurant	Bar	Bookstore
6	Willowdale, Willowdale East	9	6.755556	M2N	North York	43.770120	-79.408493	Ramen Restaurant	Sandwich Place	Café	Shopping Mall	Restaurant

Neighborhoods with a average restaurant rating of lower than 7 are disqualified

DECISION METRICS





CONCLUSION

Final decision can be made with more analysis conducted and a clearer business plan regarding, for example, investment, target consumers. At this point, these three neighborhoods are all potentially great locations for opening a Chinese restaurant in Toronto.



THANK YOU!
