

IBM Data Science Capstone

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Background

- Mr. Arif – novice businessperson
- Plan – open a restaurant
- Requirements
 - Health-conscious neighborhood
 - Nearby a central location
 - A unique type
 - Distant from other similar restaurants

Data Requirements

1. Neighborhoods in the city of Toronto.
2. Health-consciousness in the neighborhoods.
3. Most visited venues in those neighborhoods.
4. Locations of existing restaurants in those neighborhoods.
5. Types of restaurants popular in those neighborhoods

Data Sources

1. Wikipedia: to get the data of neighborhoods in Toronto.
2. <https://map.toronto.ca/wellbeing>: to get the data about the health-consciousness in the neighborhoods.
3. Cognitive class Toronto data: to get the latitudes and longitudes of the neighborhoods.
4. Foursquare: to get the data about the most visited venues as well as locations and types of existing restaurants.

Methodology

1. Shortlist neighborhoods
2. Search for venues in the neighborhoods
3. Select the restaurant category and the neighborhood
4. Look for a competitive location

Shortlist neighborhoods

	Neighborhood	Latitude	Longitude	Total_Population	Healthy_Food_Index
0	Caledonia-Fairbank	43.6899	-79.4552	9955	53.48
1	Weston-Pellam Park	43.6716	-79.4577	11098	52.57
2	Lawrence Park North	43.7238	-79.3886	14607	52.03
3	Mount Pleasant East	43.7051	-79.3848	16775	50.40
4	Hillcrest Village	43.8049	-79.3547	16934	48.46
5	Bedford Park-Nortown	43.7303	-79.4114	23236	47.74
6	North Riverdale	43.6698	-79.3554	11916	47.17
7	Ionview	43.7308	-79.2739	13641	47.14
8	York University Heights	43.7664	-79.4774	27593	47.00
9	High Park-Swansea	43.6536	-79.4653	23925	46.53
10	Edenbridge-Humber Valley	43.6671	-79.5280	15535	46.41
11	South Riverdale	43.6698	-79.3554	27876	45.86
12	Palmerston-Little Italy	43.6600	-79.4175	13826	45.81
13	Runnymede-Bloor West Village	43.6593	-79.4838	10070	45.64

Neighborhoods in the map



Selection of restaurant category

- Far-Eastern: Asian, Vietnamese, Sushi, Thai, Chinese, Korean, Japanese, Ramen, Cantonese, Seafood, Vegan
- **Eastern: Falafel, Middle-Eastern, Indian, Turkish**
- American: Brazilian, New American, American, Mexican, Latin American, South American, Fast Food, Cuban
- European: Portuguese, Italian, Greek, Tapas, Mediterranean, French

Look for a competitive location

	Grocery_Store	Bakery	Fish_Market	Shopping_Mall	Organic_Grocery
High-Park Swansea (Indian)	2.581847	3.957517	3.976506	2.259624	2.593617
Palmerston-Little Italy (Indian)	3.254022	2.985257	3.001971	2.061828	3.266159
Palmerston-Little Italy (Indian)	3.117174	3.093872	3.111153	2.086341	3.129330
Caledonia-Fairbank (Falafel)	2.470720	4.003154	4.022444	2.370989	2.482428
High-Park Swansea (Falafel)	2.159232	3.378753	3.399106	2.836182	2.171395