Opening an African Restaurant in Downtown Toronto

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Introduction

❑ Toronto has a dynamic and diverse culinary scene.

❑ However, there are a few Ghanaian (West Africa) restaurants, especially, in downtown Toronto.

❑ An African restaurant chain would like to open a couple of Ghanaian restaurants in downtown Toronto.

❑ The company would like to open their Ghanaian restaurants in neighbourhoods that have no or very few African restaurants.

❑ The purpose of this project was to identify such neighbourhoods in downtown Toronto.

Data

Data for this project was from:

❑ **Toronto Wikipedia page**: Postal codes, boroughs and neighbourhoods information.

❑ **Geopy library**: This package was used to generate geolocation data (latitude and longitude) for the downtown Toronto neighbourhoods.

❑ **Foursquare API**: Used to generate African restaurant venue details for the respective neighbourhoods.

Methodology and Analysis

This section outlines the process used to solve the business problem:

❑ Data Acquisition and Cleaning

❑ Exploratory Data Analysis

❑ Model Development

Methodology and Analysis
(Data Acquisition and Cleaning)

❑ Scraped and cleaned the neighbourhood data from Toronto's Wikipedia site.

	Postal code	Borough	Neighborhood
4	M5A	Downtown Toronto	Regent Park , Harbourfront
6	M7A	Downtown Toronto	Queen's Park , Ontario Provincial Government
13	M5B	Downtown Toronto	Garden District, Ryerson
22	M5C	Downtown Toronto	St. James Town
31	M5E	Downtown Toronto	Berczy Park

❑used the Geopy library to generate the geolocation data needed for my analysis.

	Postal code	Borough	Neighborhood	Latitude	Longitude
4	M5A	Downtown Toronto	Regent Park , Harbourfront	43.6555	-79.3626
6	M7A	Downtown Toronto	Queen's Park , Ontario Provincial Government	43.6641	-79.3889
13	M5B	Downtown Toronto	Garden District, Ryerson	43.6572	-79.3783
22	M5C	Downtown Toronto	St. James Town	43.6513	-79.3756
31	M5E	Downtown Toronto	Berczy Park	43.6456	-79.3754

Methodology and Analysis
(Exploratory Data Analysis)

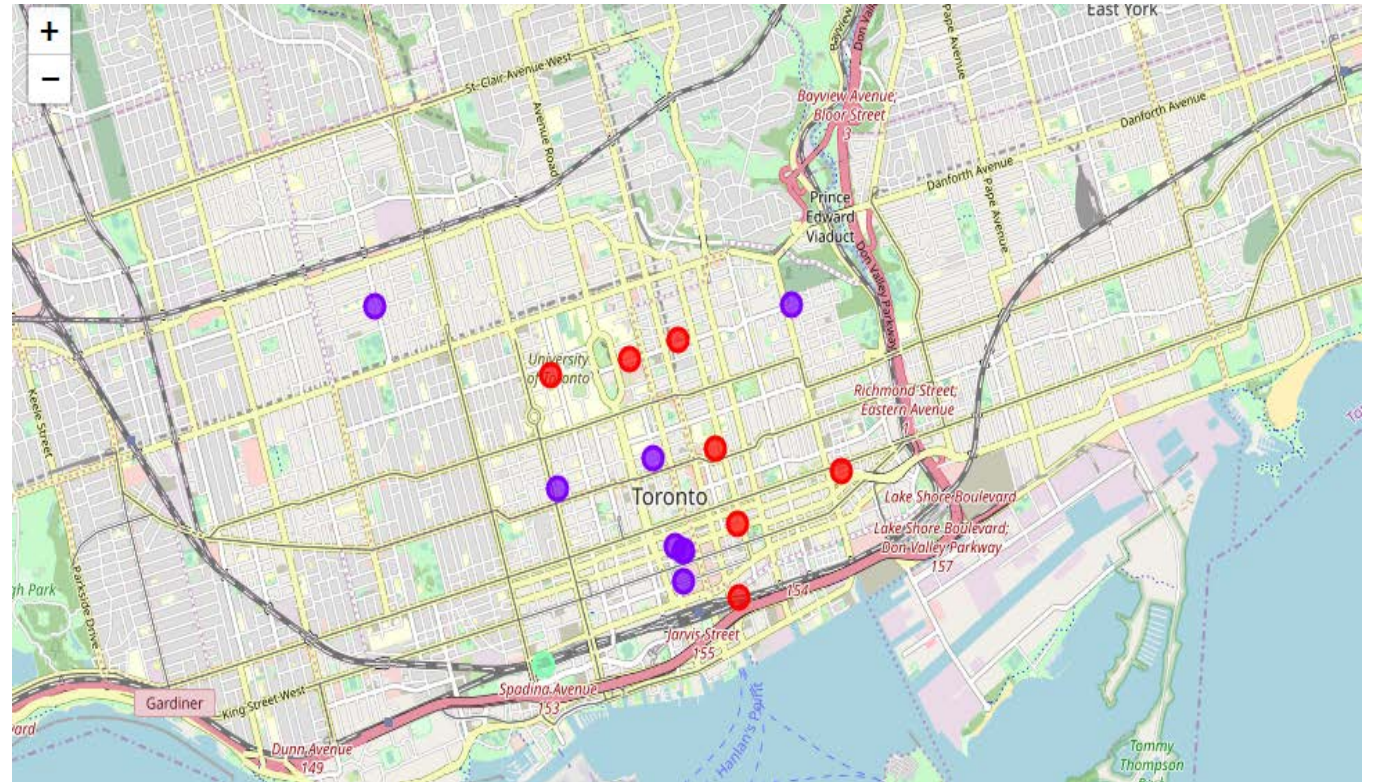❑ Map of Toronto with Downtown neighbourhoods superimposed.

❑African Restaurants with 1km radius of Downtown Toronto neighbourhoods.

	Neighborhood	Neighborhood Latitude	Neighborhood Longitude	Venue	Venue Latitude	Venue Longitude	Venue Category
0	Regent Park , Harbourfront	43.6555	-79.3626	Ethiopian Keeffaa Forest Coffee	43.655958	-79.363977	Ethiopian Restaurant
1	Regent Park , Harbourfront	43.6555	-79.3626	King Solomon Queen Of Sheba	43.655731	-79.363986	Ethiopian Restaurant
2	Regent Park , Harbourfront	43.6555	-79.3626	Enat Buna	43.653920	-79.371570	Ethiopian Restaurant
3	Queen's Park , Ontario Provincial Government	43.6641	-79.3889	Ethiopian House	43.666599	-79.385669	Ethiopian Restaurant
4	Garden District, Ryerson	43.6572	-79.3783	Ethiopiques	43.656513	-79.377078	Ethiopian Restaurant

Model Development

❑ Used *k*-means to group the neighbourhoods into 3 clusters.

❑ Different coloured circles on the map represent the various clusters

Results

From the analysis:

❑ **Cluster 0**: Mainly Ethiopian Restaurants as the most common venues

❑ **Cluster 1**: Ethiopian and other African Restaurants.

❑ **Cluster 2**: Neighbourhoods with no or uncommon African Restaurant.

	Postal code	Borough	Neighborhood	Latitude	Longitude	Cluster Labels	1st Most Common Venue	2nd Most Common Venue	
4	M5A	Downtown Toronto	Regent Park , Harbourfront	43.6555	-79.3626	0	Ethiopian Restaurant	Restaurant	
6	M7A	Downtown Toronto	Queen's Park , Ontario Provincial Government	43.6641	-79.3889	0	Ethiopian Restaurant	Restaurant	
13	M5B	Downtown Toronto	Garden District, Ryerson	43.6572	-79.3783	0	Ethiopian Restaurant	Restaurant	
22	M5C	Downtown Toronto	St. James Town	43.6513	-79.3756	0	Ethiopian Restaurant	Restaurant	
31	M5E	Downtown	Berczy Park	43.6456	-79.3754		Ethiopian	Restaurant	

	Postal code	Borough	Neighborhood	Latitude	Longitude	Cluster Labels	1st Most Common Venue	2nd Most Common Venue	
40	M5G	Downtown Toronto	Central Bay Street	43.6564	-79.3860	1	Ethiopian Restaurant	African Restaurant	
41	M6G	Downtown Toronto	Christie	43.6683	-79.4205	1	Ethiopian Restaurant	African Restaurant	
49	M5H	Downtown Toronto	Richmond , Adelaide , King	43.6496	-79.3833	1	Ethiopian Restaurant	African Restaurant	
67	M5K	Downtown Toronto	Toronto Dominion Centre , Design Exchange	43.6469	-79.3823	1	African Restaurant	Restaurant	

	Postal code	Borough	Neighborhood	Latitude	Longitude	Cluster Labels	1st Most Common Venue	2nd Most Common Venue	
139	M5V	Downtown Toronto	CN Tower , King and Spadina , Railway Lands , ...	43.6404	-79.3995	2	Portuguese Restaurant	Restaurant	

Discussions

❑ Neighbourhoods in cluster 0 and cluster 1 have African restaurants as the most common venues.

❑ To open the restaurants in neighbourhoods with no or few African restaurants, the results show that neighbourhoods in cluster 2 would be the best place:

o CN Tower
o King and Spadina
o Railways Lands
o Harbourfront West
o Bathurst Quay
o South Niagara
o Island airport

Conclusions

❏ The objective of this project was to identify neighbourhoods in downtown Toronto that would be good candidate locations for opening Ghanaian restaurants.

❏ By clustering African restaurants in Downtown Toronto using Foursquare and Toronto neighbourhoods data, I identified CN Tower, King and Spadina, Railways Lands, Harbourfront West, Bathurst Quay, South Niagara and Island airport as neighbourhoods that would be optimal for opening Ghanaian restaurants.