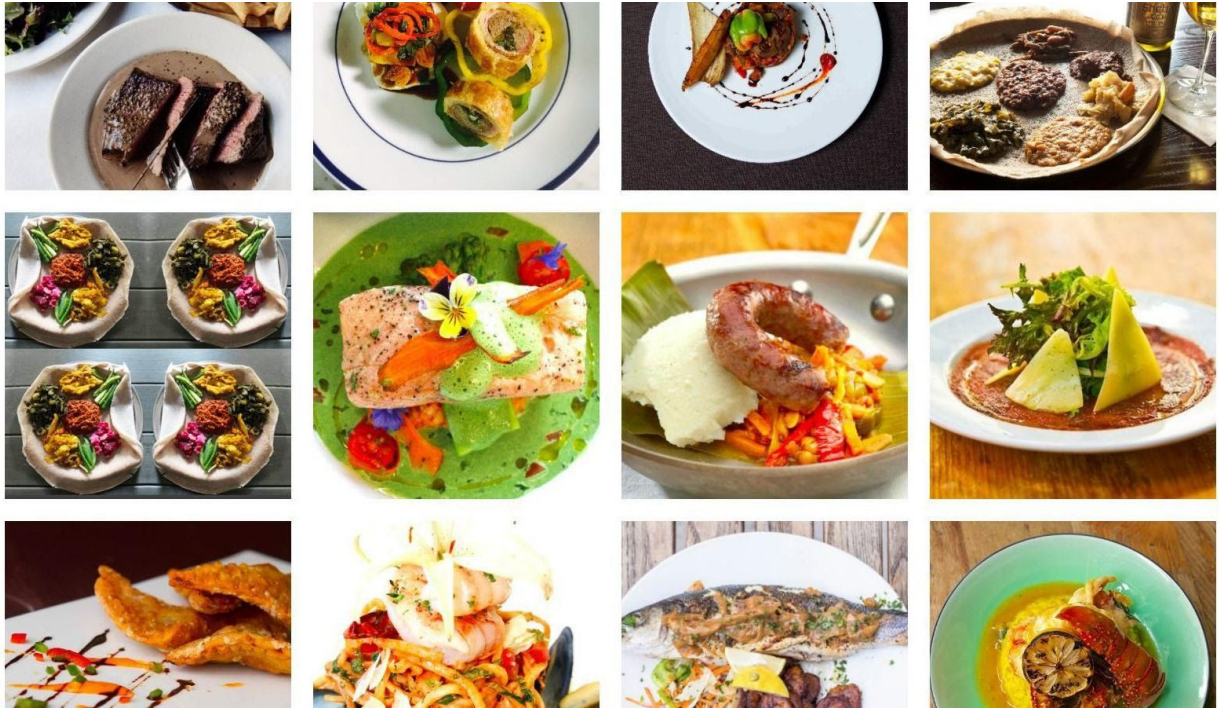


Capstone Project: Ancient and Modern African Restaurant in Canada



1. Business Problem

Background:

The long-term and growing body of evidence on migration and mobility shows that migration is in large part related to the broader global economic, social, political and technological transformations that are affecting a wide range of high-priority policy issues. As the processes of globalization deepen, these transformations increasingly shape our lives – in our workplaces, in our homes, in our social and spiritual lives – as we go about our daily routines. Increasing numbers of people are able to access information, goods and services from around the world because of the ongoing expansion in distance-shrinking technologies.

We have also seen the scale of international migration increase in line with recent trends. The number of international migrants is estimated to be almost 272 million globally, with nearly

two-thirds being labour migrants.⁹ This figure remains a very small percentage of the world's population (at 3.5%), meaning that the vast majority of people globally (96.5%) are estimated to be residing in the country in which they were born.

However, the estimated number and proportion of international migrants already surpasses some projections made for the year 2050, which were in the order of 2.6 per cent or 230 million.¹⁰ That said, it is widely recognized that the scale and pace of international migration is notoriously difficult to predict with precision because it is closely connected to acute events (such as severe instability, economic crisis or conflict) as well as long-term trends (such as demographic change, economic development, communications technology advances and transportation access).

Problem:

1,198,540 Africans are said to be in Canada in 2016 Canada is credited with 13,4 Africans by the same Report (World Migration Report 2020) Immigration is said to have tripled in the last 5 years . The reason being Canada pushes to expand its labour force and lower the average age of its labour force in 2019 541000 immigrants came to Canada. Nigeria by same report is quoted as 4th in the list of countries given permanent residency. With the influx of youth to Canada, location of restaurants which will concentrate on provision of African especially Nigerian meals served in the traditional way in earthen pots, dishes and calabash alongside modern culture culinary is justified.

Key Question:

So our key question is - How to find the best location for opening an African Restaurant in Toronto?

2. Data Description and how it will be used to solve the problem

Data Source and Description:

1. Wikipedia Page - Black Canadian Data
[https://en.wikipedia.org/wiki/Black_Canadians]

This page gives data on the Immigration and Business Policies of USA and Canada

2. African Immigration to Canada - 1980 to 2013 data

[https://drive.google.com/file/d/1qHgLEZQR7DKtau_9KkDqsvdLvoTdWUsh/view?usp=sharing]

This spreadsheet shows statistics of immigration from Africa to Canada between 1980 and 2013

3. Canada M Postal Codes, borough, neighborhood

[https://en.wikipedia.org/wiki/List_of_postal_codes_of_Canada:_M]

This wiki page contains the postal codes, borough and neighbourhood in Toronto Canada

4. Canada M Postal Codes, latitude , longitude

[http://cocl.us/Geospatial_data]

This data helps to connect postal code data with its original longitude a

5. Number of restaurants, type, location and neighborhood - Foursquare API

[<https://foursquare.com>]

This foursquare API will help us determine the number of African Restaurants in the Neighborhood.

6. Foursquare categories of Restaurant

<https://developer.foursquare.com/docs/resources/categories>

Foursquare API is a location data provider with information about all manner of venues and events within an area of interest.

Using these datasets and various data science tools including the Foursquare API to generate and process the neighborhoods information and location, we will be able to pinpoint areas that will be advantageous for best possible final locations for stakeholders to build African restaurants

3. Methodology

To start this project, necessary data science libraries were imported such as pandas for data analysis, numpy for numerical analysis, folium for locational maps , matplotlib for visualizations. Next, the neighbourhood postal code data gotten from the wiki page as stated in the data description section was converted into a dataframe and it was properly cleaned for better analysis.

	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
4	M7A	Downtown Toronto	Queen's Park, Ontario Provincial Government
...
98	M8X	Etobicoke	The Kingsway, Montgomery Road, Old Mill North
99	M4Y	Downtown Toronto	Church and Wellesley
100	M7Y	East Toronto	Business reply mail Processing Centre, South C...
101	M8Y	Etobicoke	Old Mill South, King's Mill Park, Sunnylea, Hu...
102	M8Z	Etobicoke	Mimico NW, The Queensway West, South of Bloor,...

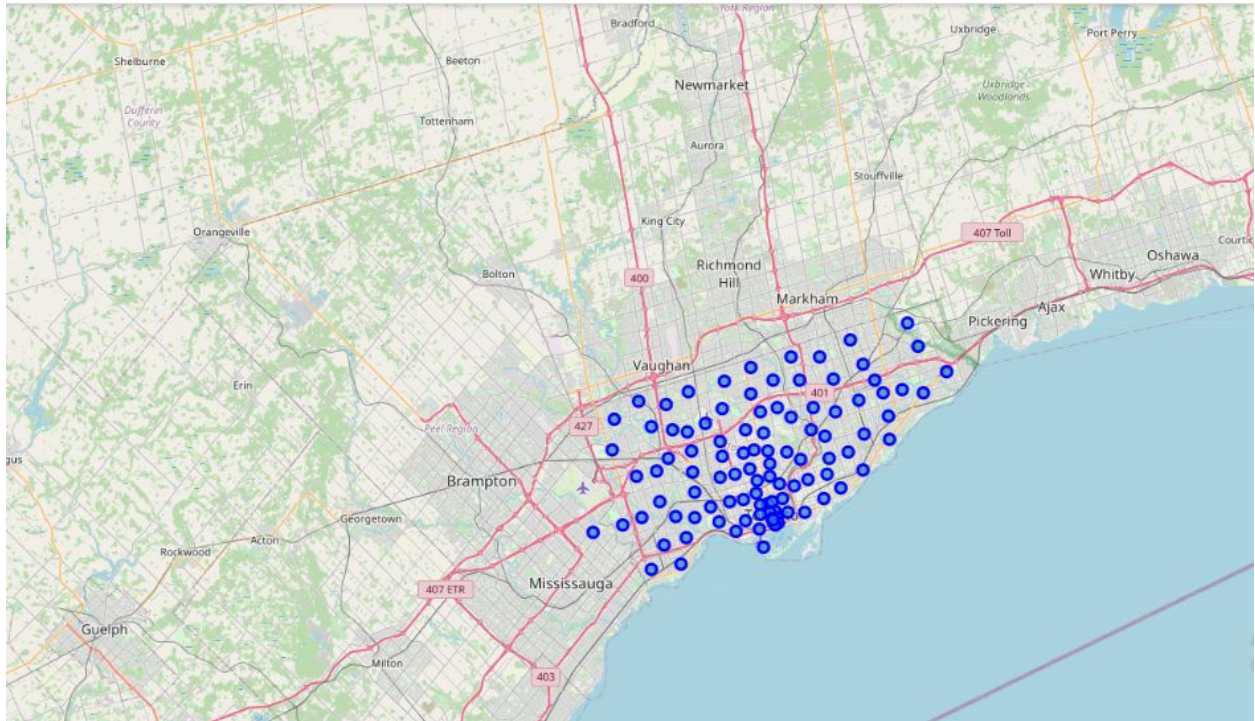
103 rows × 3 columns

Using the pgeocode library, off-line querying was performed to get the GPS coordinates, region name and municipality name from the postal codes in the dataset. From where there was extraction of the longitude and latitude of each region.

	Postal Code	Borough	Neighbourhood	Latitude	Longitude
0	M3A	North York	Parkwoods	43.7545	-79.3300
1	M4A	North York	Victoria Village	43.7276	-79.3148
2	M5A	Downtown Toronto	Regent Park, Harbourfront	43.6555	-79.3626
3	M6A	North York	Lawrence Manor, Lawrence Heights	43.7223	-79.4504
4	M7A	Downtown Toronto	Queen's Park, Ontario Provincial Government	43.6641	-79.3889
...
98	M8X	Etobicoke	The Kingsway, Montgomery Road, Old Mill North	43.6518	-79.5076
99	M4Y	Downtown Toronto	Church and Wellesley	43.6656	-79.3830
100	M7Y	East Toronto	Business reply mail Processing Centre, South C...	43.7804	-79.2505
101	M8Y	Etobicoke	Old Mill South, King's Mill Park, Sunnylea, Hu...	43.6325	-79.4939
102	M8Z	Etobicoke	Mimico NW, The Queensway West, South of Bloor,...	43.6256	-79.5231

103 rows × 5 columns

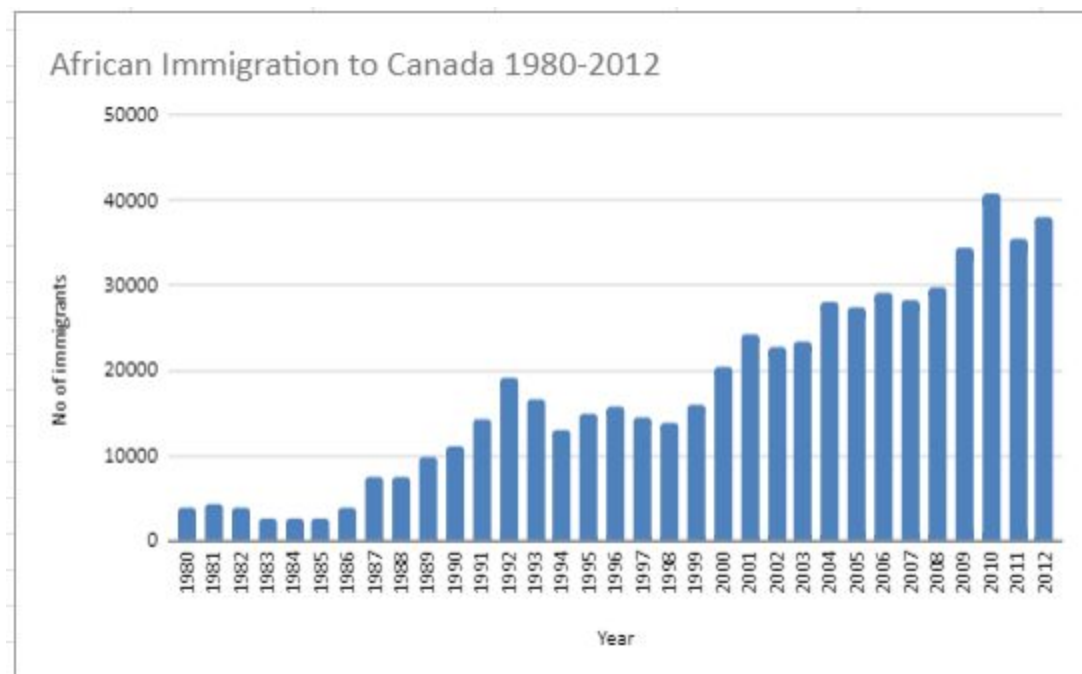
Then, using the folium library, the map of Toronto with neighbourhoods contained in the postal codes in the dataset was visualized through matplotlib



From research, it was noted that areas such as Lawrence Height, St James Town and Malvern contained a high percentage of Africans. The aforementioned boroughs were explored to identify the presence of African or African related restaurants.

4. Result

Immigration of Africans to Canada has been on the rise, this said to be attributable to Canada's effort to reduce the working class age and relaxation of entry requirements. It is also observed that African immigrants have tripled in the last five years and in 2021, Africans constitute 13.4% of Canadians.



This population definitely requires to be serviced with native-pron delicacies in their traditional settings.

Further exploration on areas with high black populations showed that there were no African restaurants in the area.

24	Café Plenty	Café	43.649118	-79.378313
25	The Reservoir Lounge	Jazz Club	43.648517	-79.374556
26	St. Lawrence Market (North Building)	Farmers Market	43.648793	-79.371945
27	D.W. Alexander	Cocktail Bar	43.648333	-79.373826
28	St. Lawrence Market (South Building)	Farmers Market	43.648743	-79.371597
29	Fresh On Front	Vegetarian / Vegan Restaurant	43.647815	-79.374453
30	Berczy Park	Park	43.648048	-79.375172
31	Garrison Bespoke	Tailor Shop	43.648102	-79.376334
32	Mos Mos Coffee	Café	43.648159	-79.378745
33	HomeSense	Furniture / Home Store	43.652440	-79.370440

```

african_count=nearby_venues['name'].str.contains('African').sum()
if african_count>0:
    print ("There are {a} African strings".format(a=african_count))
else: print("There are no African Strings")

```

There are no African Strings

The closest type of African restaurant was found in St James Town as a Moroccan Restaurant. Morocco is a small part of Northern Africa. Therefore, a Moroccan Restaurant will underserve the African population. This necessitates the establishment of African Restaurants serving African delicacies in the traditional settings.

[78]	73	Aroma Espresso Bar	Coffee Shop	43.648224	-79.376352
	74	Irish Embassy	Irish Pub	43.647918	-79.377273
	75	Berber SOCIAL	Moroccan Restaurant	43.648114	-79.374046
	76	East Thirty-Six	Bistro	43.648409	-79.375017
	77	The Sultan's Tent and Cafe Moroc	Moroccan Restaurant	43.647928	-79.374341
	78	Z-Teca Gourmet Burritos	Burrito Place	43.648014	-79.379119
	79	Tim Hortons	Coffee Shop	43.647955	-79.373833
	80	Bier Markt Esplanade	Belgian Restaurant	43.647236	-79.373892
	81	The Old Spaghetti Factory	Italian Restaurant	43.646964	-79.374403
	82	Scotland Yard Pub	Pub	43.647053	-79.374060
	83	Hotel Victoria	Hotel	43.648084	-79.377582
	84	Bluma Appel Theatre	Performing Arts Venue	43.647947	-79.375519
	85	Wynn Fitness	Gym	43.648009	-79.373720
	86	Cafe Nicole	Café	43.646908	-79.374422
	87	Amsterdam Bicycle Club	Bar	43.646920	-79.374421

```
[81] african_count_in_stjames=nearby_venues['categories'].str.contains('Moroccan Restaurant').sum()
if african_count_in_stjames>0:
    print ("There are {a} African strings".format(a=african_count_in_stjames))
else: print("There are no African Strings")

There are 2 African strings
```

5. Discussion/Recommendation

From the foregoing analysis a chain of African restaurants concentrating on meeting delicacies of different age brackets could be explored. Since Africa is very large and permanent residency has been given to a greater part of the African population, a business of setting up African restaurants with specialties in countries with related menu is a sure profit-making service delivery venture.