



Opening a Café in Toronto

Capstone Project

Introduction

- Dining out or simply going for a coffee are common pastimes in the city of Toronto
- Therefore, it makes financial sense to invest in a new Toronto café
- In order to ensure that the café is as successful as possible, the ideal location for the venue needs to be found.
- To maximise the number of potential customers the café would ideally be close to the centre of the city, where there is likely to be a lot of foot traffic.
- However, it should not be too close to areas with a high density of existing cafés, coffee shops or tea rooms as to reduce the amount of direct competition.

Data

- Only the central boroughs of Downtown Toronto and Queen's Park are selected.
- The neighborhoods within these boroughs are identified by scraping the Toronto postcode information from the Wikipedia page: https://en.wikipedia.org/wiki/List_of_postal_codes_of_Canada:_M.
- The coordinates of the Toronto neighbourhoods can then be found using the package 'geocoder'.
- The Foursquare API is used to find information on all venues in Toronto.
- Selections can be made so that only information about the cafés, coffee shops or tea rooms in Downtown Toronto and Queen's Park are returned.

Data

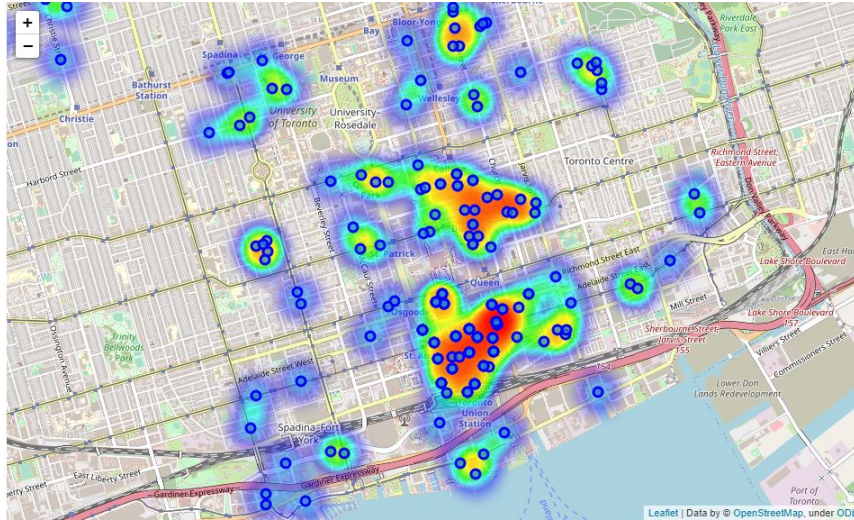
| | Neighborhood | Neighborhood Latitude | Neighborhood Longitude | Venue | Venue Latitude | Venue Longitude | Venue Category |
|----|-------------------------------|-----------------------|------------------------|-------------------------------|----------------|-----------------|----------------|
| 0 | Regent Park, Harbourfront | 43.65512 | -79.36264 | Tandem Coffee | 43.653559 | -79.361809 | Coffee Shop |
| 6 | Regent Park, Harbourfront | 43.65512 | -79.36264 | Rooster Coffee | 43.651900 | -79.365609 | Coffee Shop |
| 8 | Regent Park, Harbourfront | 43.65512 | -79.36264 | Sumach Espresso | 43.658135 | -79.359515 | Coffee Shop |
| 12 | Regent Park, Harbourfront | 43.65512 | -79.36264 | Starbucks | 43.651613 | -79.364917 | Coffee Shop |
| 18 | Regent Park, Harbourfront | 43.65512 | -79.36264 | Savoury Grounds | 43.656821 | -79.358970 | Coffee Shop |
| 29 | Ontario Provincial Government | 43.66253 | -79.39188 | Coffee Island | 43.664271 | -79.386972 | Coffee Shop |
| 32 | Ontario Provincial Government | 43.66253 | -79.39188 | Second Cup | 43.659018 | -79.394152 | Coffee Shop |
| 34 | Ontario Provincial Government | 43.66253 | -79.39188 | Aroma Espresso Bar | 43.658928 | -79.389903 | Café |
| 36 | Ontario Provincial Government | 43.66253 | -79.39188 | Tim Hortons | 43.659415 | -79.391221 | Coffee Shop |
| 37 | Ontario Provincial Government | 43.66253 | -79.39188 | Tim Hortons | 43.658906 | -79.388696 | Coffee Shop |
| 40 | Garden District, Ryerson | 43.65739 | -79.37804 | Page One Cafe | 43.657772 | -79.376073 | Café |
| 54 | Garden District, Ryerson | 43.65739 | -79.37804 | Tokyo Smoke | 43.657020 | -79.380445 | Coffee Shop |
| 55 | Garden District, Ryerson | 43.65739 | -79.37804 | Oakham Café | 43.658078 | -79.378315 | Café |
| 57 | Garden District, Ryerson | 43.65739 | -79.37804 | Balzac's Coffee | 43.657854 | -79.379200 | Coffee Shop |
| 59 | Garden District, Ryerson | 43.65739 | -79.37804 | The Black Canary Espresso Bar | 43.657029 | -79.381385 | Café |

Methodology

- Foursquare credentials are required to use the FourSquare API.
- A function is created to find all venues near the to each of the coordinates compiled using geocoder.
- The name, type and location of each venue is collected into a new DataFrame.
- A selection is made on the DataFrame to return only the cafés, coffee shops, tea rooms and bubble tea shops.

```
toronto_cafes=toronto_venues[(toronto_venues['Venue Category']=='Café') | (toronto_venues['Venue Category']=='Coffee Shop') | (toronto_venues['Venue Category']=='Tea Room') | (toronto_venues['Venue Category']=='Bubble Tea Shop')]
```

Methodology



Locations (blue circles) and heatmap of cafés, coffee shops, tea rooms and bubble tea shops around Downtown Toronto. Made using Folium.

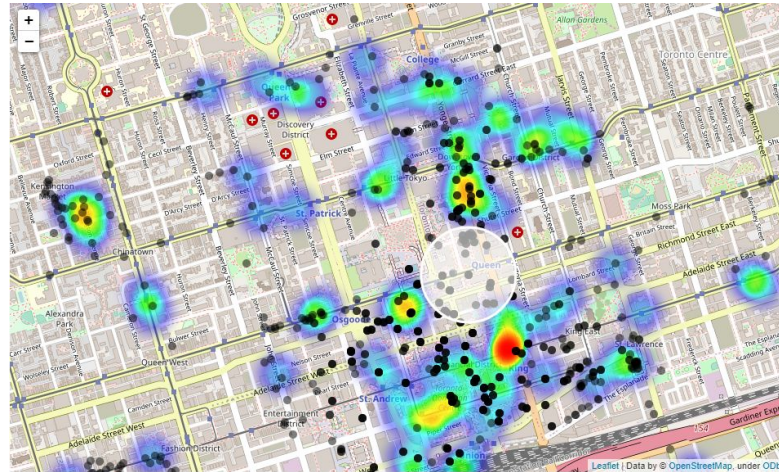
Results

A selection is made on the DataFrame to return everything but the cafés, coffee shops, tea rooms and bubble tea shops:

```
toronto_other=toronto_venues[(toronto_venues['Venue Category']!='Café') & (toronto_venues['Venue Category']!='Coffee Shop') & (toronto_venues['Venue Category']!='Tea Room') & (toronto_venues['Venue Category']!='Bubble Tea Shop')]
```

The other types of venue are highlighted (black dots) onto a map of Toronto using Folium. The same heatmap of the highest density regions of cafés, coffee shops, tea rooms and bubble tea shops around Downtown Toronto is added.

Results



Locations of all other types of venue (black dots) with heatmap of cafés, coffee shops, tea rooms and bubble tea shops around Downtown Toronto. The white circle shows this reports determination of the ideal location for a new café.

Discussion

- Cafés, coffee shops, tea rooms and bubble tea shops are popular venues in Toronto with 201 found in Downtown Toronto and Queen's Park alone.
- Therefore, there is much potential in opening a new business in this area.
- To maximise the number of potential customers it is recommended to open the new café in Downtown Toronto or Queen's Park where there is likely to be a higher traffic of people.
- The area suggested in the results section is determined to be the ideal location as it is in the heart of Downtown Toronto, there is a high number of other types of venue meaning there is likely to be lots of people, therefore many potential customers, whilst being an area with a low density of cafés, coffee shops, tea rooms and bubble tea shops so there will be limited competition.

Conclusion

- The purpose of this report was to find the ideal location for a new café in Toronto.
- This makes business sense as cafés, coffee shops, tea rooms and bubble tea shops are popular venues in Toronto.
- To solve this problem data on existing venues in Downtown Toronto were collated using the Geocoder and FourSquare APIs.
- The ideal location of a circle of radius 200 metres, centred on 43.65 by -79.38 degrees was selected based on the criteria that it is in the heart of Downtown Toronto with a high number of other types of venue with a low density of cafés, coffee shops, tea rooms and bubble tea shops.
- These criteria were selected to maximise the number of potential customers and limit competition.
- Other factors need to be considered before proceeding with this venture such as: Property prices, Property availability, Price ranges of other cafés in Toronto, Menu items of successful cafés in Toronto, Popularity of potential menu items, Running costs, Health codes etc.
- These recommendations will be provided to stakeholders as evidence that this is a new business worth investing in.