**TORONTO COFFEE MARKET ANALYSIS**

1. **Introduction**

Big coffee chains (e.g Peet Tea and coffee, Bewley’s) would like to enter Canadian Market or expand their current territory. What better market can be, other than Toronto to get foot into the door.

Big coffee chains would be interested to learn about the Toronto coffee market and do some research and surveys before entering the market.

Purpose of this analysis will be to learn about how the current coffee shop outlets are performing in Toronto and provide a flavour to the players who are eyeing to enter.

Will try to find out answers to the following questions:

a. How many big chains are currently operating in Toronto?

b. How these brands are perceived by the customers?

3. What are the probable locations to open outlets?

**2. Data**

The data available at Wikipedia link below is parsed by using BeautifulSoup library. The neighbourhood data was then explored using Foursquare calls using Latitude and Longitude values of the boroughs.

(<https://en.wikipedia.org/wiki/List_of_postal_codes_of_Canada:_M>)

The data fetched from the above Foursquare is then filtered out to get coffee shops in all the neighbourhoods. With the help of advance Foursquare calls these coffee shops are further explored to get customers rating and number of customers who have rated these shops.

*\*(since the limit is 50 for advance calls and we have approx. 190 coffee shops, it took 4 days to fetch data from a non-premium account). Had stored this data in CSV file (so that it is not lost while rerunning the code) and uploaded to use for further analysis)*

The above data is then used to do analysis to find out about current coffee stores running in Toronto area.

1. **Methodology**

The data fetched from Foursquare explore calls using borough latitude and longitude is used for further analysis. Neighbourhood’s are clustered based on top ten destinations present in the vicinity excluding the coffee shops. The neighbourhood are divided into four clusters.

From the Foursquare explored data coffee shops are dataset is filtered out. Using the ID’s of the coffee shops venues, Foursquare advanced calls are made to fetch individual rating and number of customers who rated the outlets.

The data is then consolidated on number of venue to count number of outlets for each brand in the city and average rating of the brand and further exploratory analysis is done for each brand dataset using describe function, box plot and bar graphs to understand how they are perceived by customers.

In the end the coffee shops are plotted using latitude, longitude and colour coding using the rating to understand how they are located geographically.

1. **Results**
   1. Neighbourhoods of Toronto on the map

A picture containing text, map

Description automatically generated

4.2 Cluster Labels for various neighbourhoods:

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4.4 Neighbourhood clusters on the map of Toronto

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4.5 Screenshot of venue ratings and number of customers who rated the outlets:

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4.6 Number of outlets for each brand in Toronto city:

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4.7 Avg. ratings given by customer to different brand outlets:

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4.8 Exploratory analysis of total and brand-wise data set using describe function:

Total:A screenshot of a cell phone

Description automatically generatedStarbucks:

A screenshot of a cell phone

Description automatically generated

Tim Hortons:

A screenshot of a cell phone

Description automatically generated

4.9 Box Plots of ratings spread:

Total:

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Starbucks:

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Tim Hortons:

A screenshot of a social media post

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4.10 Coffee shops ratings plotted on the map

Total: *Green- Good Rating Yellow- Decent rating Red- Poor Rating*

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Starbucks: *Green- Good Rating Yellow- Decent rating Red- Poor Rating*

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Description automatically generated

Tim-Hortons: *Green- Good Rating Yellow- Decent rating Red- Poor Rating*

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1. **Discussion and Conclusion**

Below are observations and recommendations that can be made based on the analysis:

* 1. There are only two major coffee shop brands operating in Toronto city. i.e. Starbucks and Tim Hortons.
  2. All the coffee shops exist in only one cluster out of the four clusters that were made based on top destinations in the neighbourhood.
  3. Starbucks and Tim Hortons have a low average customer rating than other coffee outlets in Toronto.
  4. Starbucks outlets are significantly perceived better than Tim Hortons outlets. (mean of ratings standing at 7.5 vs 6.3)
  5. Other small brands have number of outlets less than or equal to five and are rated very high by customers. (as high as 8 Dineen @Commerce Court 8.0, Pilot Coffee Roasters 8.66)
  6. When we refer to box plot of Starbucks, we see some outliers. There are few Starbucks outlets performing very poor in comparison to other Starbucks outlets.
  7. Most of the good rated or average rated outlets are near downtown
  8. As we go far from downtown of Toronto, rating of coffee outlets drops significantly. We can see lot of red dots away from the centre.
  9. There are lot of neighbourhood which belong to cluster one and does not contain any coffee outlets. Initial outlets can be open in these if any brand wants to enter Toronto market.

1. **References**

<https://foursquare.com/>

<https://www.wikipedia.org/>

*\*\*This project report is solely used for academic purpose and does not intend to effect any brand value of any company operating in Canada.*