Applied Coursera Capstone Project

for

IBM Data Science Professional Certificate

Part 1

January 15, 2021

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Introduction

There is something special about a local coffee shop. The intimate environment, the sense of community, a comfortable space to work from, and of course a great cup of joe. Throughout the city of Toronto there are many, if not hundreds, of coffee shops. So in this competitive market of small independent coffee shops, where might a prospective proprietor open their new coffee shop?

Business Problem

Opening a coffee shop, like any small business, comes with hurdles and challenges, some being unique to this specific type of business.
This report shall look specifically at the city of Toronto and its neighbourhoods. With many coffee shops currently open around the city and some neighbourhoods having a concentration of shops, knowing which neighbourhood to open a shop in might feel like a daunting task. Within the scope of this analysis we look to help remove this hurdle for a potential owner/operator by figuring out where a good location, geographically, to open a new coffee shop would be.

Data

For this analysis, data from several sources shall be used. This data shall include:
- Neighbourhood information:
    - Name
    - Location (latitude and longitude)
    - Population
    - Number of Coffee shops per
- Coffee shop information:
    - Name and location

Sources of data are:
- Open Data Portal for the CIty of Toronto - https://open.toronto.ca/
    - Using the data files (.csv) for Neighbourhood Boundaries and Profiles.
    - Profiles - https://open.toronto.ca/dataset/neighbourhood-profiles/
    - Boundaries - https://open.toronto.ca/dataset/neighbourhoods/

- Foursquare API
    - To acquire the venue data for coffee shops in these neighbourhoods and the number of shops.

The data will be used to determine the population per neighbourhood and how many coffee shops are in each neighbourhood. The idea being that a neighbourhood with few coffee shops but a high population would be the ideal location for a new shop to open.