**IBM Data Science Capstone Project**

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Analyzing the Neighborhoods of Toronto, Canada For Starting a New Restaurant.

1. **Introduction**
   1. **Background**

Toronto is said to be a fast-growing city, that is unsurprising really with the number of new skyscrapers constantly popping up. The city is getting pretty much larger at the blink of an eye. The city has benefited from good planning from onset, making it a wonderful city to explore and be super-curios about. This is an incredible city for anyone to visit in Canada with tons of markets, delicious food, wonderful museums, and funky bars. Toronto is also the most multicultural city in the world, offering tons of diversity and culture (including lots of delicious Asian food). This report is a case study that analyzes the top neighborhoods in Toronto that would then be the best location to build a new restaurant for potential investors. I will be focusing majorly on most common venues in a particular neighborhood to determine how profitable a restaurant business will be there.

* 1. **Business Problem**

Potential Investors are interested in starting a new restaurant in Toronto. I have offered to help study the neighborhood and suggest a location that is best fit for this purpose. My main goal for this project is to properly analyze the right data about the several neighborhoods of Toronto using the data science skills I possess and then suggest to the potential investors, the best location to start a new restaurant.

1. **Data**
   1. **Neighborhood Data**

The data used throughout this project analysis was scrapped from <https://en.wikipedia.org/wiki/List_of_postal_codes_of_Canada:_M> . The data was extracted using web scraping with the BeautifulSoup library in Python. This provides the up-to-date list of all neighborhoods present in Canada.

* 1. **Geographical Coordinates**

The geographical coordinates of Toronto were extracted using Geospatial Data in Python. These coordinates are important for plotting the map of Toronto and later, the map of other neighborhoods in the city. These maps are useful while visualizing our data later in this report.

* 1. **Venue Data**

The venue data has been extracted by querying the Foursquare API. Getting this data is necessary becomes it helps to see recommendations for all neighborhoods in the city. This data is then used to study popular venues in different neighborhoods. The query returned 1,583 neighborhoods which was more than enough for an in depth analysis of the city.