Capstone Project Overview - The Battle of Neighborhoods (Week 1)

**Background**

Now that you have been equipped with the skills and the tools to use location data to explore a geographical location, over the course of two weeks, you will have the opportunity to be as creative as you want and come up with an idea to leverage the Foursquare location data to explore or compare neighborhoods or cities of your choice or to come up with a problem that you can use the Foursquare location data to solve. If you cannot think of an idea or a problem, here are some ideas to get you started:

1. In Module 3, we explored New York City and the city of Toronto and segmented and clustered their neighborhoods. Both cities are very diverse and are the financial capitals of their respective countries. One interesting idea would be to compare the neighborhoods of the two cities and determine how similar or dissimilar they are. Is New York City more like Toronto or Paris or some other multicultural city? I will leave it to you to refine this idea.
2. In a city of your choice, if someone is looking to open a restaurant, where would you recommend that they open it? Similarly, if a contractor is trying to start their own business, where would you recommend that they setup their office?

These are just a couple of many ideas and problems that can be solved using location data in addition to other datasets. No matter what you decide to do, make sure to provide sufficient justification of why you think what you want to do or solve is important and why would a client or a group of people be interested in your project.

**Review criteria**

This capstone project will be graded by your peers. This capstone project is worth **70%** of your total grade. The project will be completed over the course of **2 weeks**. Week 1 submissions will be worth **30%** whereas week 2 submissions will be worth **40% of your total grade**.

For this week, you will required to submit the following:

1. A description of the problem and a discussion of the background. (**15 marks**)
2. A description of the data and how it will be used to solve the problem. (**15 marks)**

**Existing Problem**

Our clients, Coffee Express Ltd., is an SME specializing on serving coffee and beverages including Latte, Cappuccino, Espresso and hot chocolate at Downtown Vancouver in Canada. Recently, they approach to us and express their interests in expending their branches in a city of the world’s leading financial center in North America, in particular to either New York or Toronto. Both cities are the financial capitals with many skyscrapers and businessmen where the local demands of morning beverages remain high. However, it is difficult for Coffee Express Ltd. to make the decision on the best location for their expansion since they are not familiar with the demographics in both cities.

**Data Description**

We can gather demographic data from the official census authorities about the population and income groups in both cities. After having comparison on the potential customer groups between New York and Toronto, we further explore the neighborhoods data from Foursquare API and apply Neighborhood Segmentation and Clustering to prioritize the best coffee shop locations in either one of the cities based on the foot traffic and types of competitors. Finally, we can conclude the best city and location for Coffee Express Ltd. to start their expansion.

**Deliverables**

1. Market analysis for Coffee Express Ltd.
2. Top 10 locations suggested for expansion

**Conclusion**

The deliverables can help Coffee Express Ltd. to determine whether it is recommendable to expend their network at either New York or Toronto. If yes, we will further provide a list of suggestion about the top 10 locations for expansion.