# CAPSTONE PROJECT WEEK 1: THE BATTLE OF NEIGHBOURHOOD

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### 1. INTRODUCTION/BUSINESS PROBLEM:

In this project, I will try to compare New York (United State of America) and Hong Kong. I will explore the similarity and dissimilarity features of both cities in terms of the amenities there, the population, and the class of people resident therein. Below is a short introduction to each of the selected cities:

New York is the most populous city in the United States, having an estimated 2019 population of about 8.5 million distributed over about 302.6 square miles (784 km$^2$), New York is also the most densely populated major city in the United States, the largest metropolitan area in the world by urban landmass. It is one of the world's most populous megacities and has been described as the cultural, financial, and media capital of the world, significantly influencing commerce, entertainment, research, technology, education, politics, tourism, art, fashion, and sports. New York is known for clusters of skyscrapers in New York city, and one of the world's most famous waterfalls. Travelers have many options while visiting the state, such as sipping wine at a vineyard or watching a Broadway plays. New York City is split up into five boroughs and 59 community districts: the Bronx (12 districts), Brooklyn (18 districts), Manhattan (12 districts), Queens (14 districts), and Staten Island (3 districts). Each borough has the same boundaries as a county of the state.

Hong Kong is also known as the special administrative region of the people's republic of china. It is a metropolitan area with over 7.5 million people of various nationalities. It is one of the world's most significant financial centers and commercial ports, as well as the world's tenth-largest exporter and ninth-largest importer. The city is well developed with the largest number of skyscrapers of any city in the world. It is made up of 18 districts. The population of the district ranges from 137,122 to 607,544, with typical area of 10 km$^2$ to 220 km$^2$. The District Administration Scheme was implemented in 1982 with the establishment of a district board and a district management committee in each of the districts in Hong Kong.

The main objectives of the project are:

- To explore the city features and suggest to tourists which city is more fun to visit for tourist purpose
- For businessmen looking to establish a restaurant business, we will recommend which area in which city is best for their business.

## 2. DATA:

The information about New York districts was obtained from this link, while that of Hong Kong was obtained from here. Both extracted information are converted to a .csv file for easy manipulation, and are added to my GitHub for reference purpose:

https://github.com/wolebode/Coursera_Capstone/blob/master/nyc_community1.csv

https://github.com/wolebode/Coursera_Capstone/blob/master/hk_community1.csv

In the project, we will explore:

- the segment areas of New York and Hong Kong based on the most common places using Foursquare and machine learning segmentation and clustering.
- the number of existing restaurants in the neighborhood and their distance to the city center. This will be done using a regularly spaced grid of locations centered around the city center.