# Capstone Project – The Battle of Neighbourhoods [Part 1]

## Introduction

Singapore is a sovereign island city-state in South-East Asia. It is one of the smallest countries in the world with a total land area of 730 square kilometres. Although with its small country size, the population of Singapore is about 5.7 million, making it one of the highest population densities in the world. Singapore is a multi-cultural, multi-racial society where there are 4 main official languages [English, Malay, Chinese and Tamil], with English as the lingua franca. Due to its favourable geographical position, Singapore is a major international transport hub in Asia, serving some of the busiest sea and air trade routes. In addition, the port is the world's busiest for trans-shipment traffic and the world's biggest ship refuelling centre. Due to these factors, millions of passengers and cargo, both via air and sea, pass through Singapore annually. This explains why Singapore is also one of the business hubs in the region. Because of these factors, Singapore attracts people of diverse background for work, study and play.

## Business Problem

To explore the neighbourhood in Singapore to answer the following questions:

1. To find out the Thai and Korean restaurants in Singapore.
2. The best rated Thai and Korean restaurant in Singapore to recommend for a Korean or a Thai visiting Singapore.
3. If a businessman is interested to open a Thai or a Korean restaurant in Singapore, which part of Singapore will be the best place to attract diners?
4. What type of venues are the most popular in the neighbourhoods of Singapore?

## Data Section

For this project, we will need the following data:

1. List of neighbourhoods in Singapore with location coordinates [Latitude and Longitude].
   1. Data Source: <https://en.wikipedia.org/wiki/Planning_Areas_of_Singapore>
   2. The website contains all the neighbourhoods in Singapore but without the location coordinates.
   3. To use geopy package in Python to query the latitude and longitudes of these neighbourhoods.
2. Thai and Korean restaurants in each neighbourhood in Singapore
   1. Data Source: Foursquare API
   2. With the API, we can query the venues in each neighbourhood. We can then filter these venues to get the Thai and Korean restaurants.