## Keep Your Enemies (Competitors) Closer:

A study of competition clustering in the hospitality industry in urban areas.

## Introduction:

The proverb "keep your friends close but keep your enemies closer" imparts wisdom on not only the military strategists in the ancient times, but also economists. One would consider it optimal for restaurants to be evenly distributed across urban population centres to reduce competition among businesses and servicing a wider segment of population. However, restaurants competing in the same culinary category tend to cluster and their choices of location display limited spatial dispersion.

Clustering implicitly helps restaurants collectively advertise their cuisine and achieve a shared marketing objective. For instance, one might automatically think of going to the Chinatown for Chinese food without searching for Chinese restaurants in their own neighbourhood. However, in an informationally efficient environment where one can easily search for the closest point-of-interest, spatial proximity incurs more costs for customers in the form of longer average travelling time. Thus, it is important to examine whether clustering is still optimal in the digital age.

This report documents the clustering effect of restaurants in large, globalised cities, including New York, London, Toronto, and Sydney. It further sheds some light on whether opening restaurants away from competitors is economically sensible. The findings of this report could be useful in optimising urban zoning policies to minimise travelling times and improve ease-of-access by the population.

## Data Procurement:

Locational data provided by Foursquare API can help identify the locations of points-of-interest in major cities. In addition to the location of a point-of-interest (described by its coordinates), the dataset also identifies its type, user reviews, and popularity.

Due to the limited scope of this study on population centres, only restaurants within the 2km radius of a city's CBD will be examined.