

# IBM Data Science Capstone Project- The Battle of the Neighborhoods

## 1.0 Introduction

Chicago, the largest city on the banks of Lake Michigan in the state of Illinois is the third most populous city in the United States and one of the fastest growing multicultural metropolitan centers in the world, with rapidly developing infrastructure, a beautiful waterfront, lively nightlife and liberal expression of diverse cultural identities and ideas attracting a large number of immigrants domestically and from around the world each year. The city is in fact, one of the most racially diverse metropolitan areas in the US, with a large chunk of the population being formed by African American and Asian minorities. This also promotes business and restaurants offering a large variety of cuisines ranging from Indian and Middle-Eastern dishes to Vietnamese and Japanese delicacies have flourished in the city which has become a *melting pot* of cultures from around the world. One of the major civic problems that the city faces however, is that the crime rate remains above the national average despite numerous measures that have been taken by state and federal law enforcement agencies over the last few years. In spite of these problems, Chicago remains one of the hottest destinations for setting up new business, as is evidenced by the fact that it was named among the top global cities in the US on the '*Ease of Doing Business Index*'. Furthermore, *KPMG* ranks Chicago as one of the most cost-effective cities in the world for doing business, ahead of New York and Los Angeles.

### Problem:

The background of the business problem that we will be addressing in this project is as follows- a Japanese immigrant family is moving to Chicago and setting up a business which imports authentic ingredients (such as *Nori*, *Wasabi*, *Miso*, *Sushi Rice*, *Rice Vinegar* etc.) and other food stuffs from Japan and sells them to local businesses such as eateries and restaurants. Thus, the problem is two-fold:

- The business should be set-up in an area which is in close proximity to well-established Japanese restaurants.
- The neighborhood should be well-suited to a young immigrant family, i.e., it should have all the necessary amenities in the vicinity.
- Furthermore, the neighborhood should also be as crime-free as possible, i.e., with a low crime rate.

This business problem (although very specific for the purpose of this project) can be of broad interest to anyone setting up a business in the city of Chicago, or planning to move to the city for work and settling here with family. In the following sections, I will detail the data

that will be used for this analysis, the methodology as well as a brief discussion of the results.