**Introduction/Business Problem**

I am in the process of setting up a Digital Agency that will offer several technology solutions to other businesses. Out of the many digital services my Digital Agency will provide, the core function of the company will be the following three specific technology platforms:

* Reputation Management Platform
* Social Media Posting Platform
* Food Ordering Platform

These core services will be complemented by Add-on Services such as copywriting services, blog writing, design services, voice-over services, just to name a few.

Since a Digital Agency can operate from anywhere, there are no geographical restrictions; and the list of potential clients ranges from car garages, beauty salons, churches, charities, gyms, florists, opticians, schools to estate agents. However, because to provide food ordering platform to restaurants constitutes one of the three primary technology platforms that will be offered by my Digital Agency, I will leverage Foursquare geolocation capabilities to create a data inventory of restaurants in the Edmonton, Alberta area where I live solving

**Data Description**

Targeted marketing reduces overall marketing costs, and for a new business, as is the case with the Digital Agency I will launch next week, customer discovery can be an arduous process. More challenging is to obtain relevant details about the potential customer; the benefits of such information is to increase the likelihood that the sales pitch success.

To solve these problems, I will use Foursquare geolocation platform to create a list of all the restaurants in the Edmonton area. Subsequently, I will highlight the following data about Edmonton’s restaurants as more critical to my purpose because they will optimize my marketing efforts:

* Condition of their online presence
* Whether or not they have an online food ordering platform
* What are people saying about the local, in other words, the average rating
* Contact information
* Menu
* Tips

This data is directly relevant to the core function of my business. It will allow me to approach potential clients with an intuitive discourse. In addition to the above data, obtaining the restaurants’ names, unique ID, location, and category will be useful in determining geographical dispersion context.

**Methodology**

The proposition I pursued in this exercise is quite simple, use Foursquare to generate a list of all the restaurants in Edmonton city limits of 687 square kilometres. It was a logical proposition for me to consider for the reasons mentioned in the introduction.

Through a basic Foursquare search, I located the nearest restaurant to where I live. I then used the module *geopy. geocoders (Nominatim)* to convert its address into latitude and longitude values. Using today’s date for the version attribute, I set a limit of 10000 entities. The search query value was set to ‘Restaurants’ within a radius of 217,723,962, which is effectively Edmonton’s radius.

A call was then made to Foursquare using my ClientID and Client Secret to get a list of all the restaurants in Edmonton. A JSON file was generated, and its content flattened and normalized before being rendered into a pandas data frame. The data frame was sorted and cleaned by removing irrelevant columns to the subject matter.

With a clean data frame and easily accessible information, restaurants can easily be isolated for further computing intended to gain more insights into things like ratings, tips, reviews and surrounding popular venues.

For a Digital Agency that offers a food ordering platform, social media posting platform, and reputation management, the level of information gathered in this process can be used for a competitive advantage.

**Conclusion**

Several things were missed in this exercise. Although the level of information required to assist in decision making did not necessitate an in-depth analysis of the data, there was still room to explore some of the more advanced data analysis functions available in the platform used. This was not done. Furthermore, there is a sense in which the shortest route was taken to complete the exercise; as a result, things such as using the count function to determine the number of restaurants yielded by the data.

Nevertheless, I learned by studying the data frame that not all restaurants in Edmonton were listed in the information I generated. I attribute this to the wording used for the query search. It shows that not all restaurants or food serving places are placed in the same category. Therefore, a query search must be broad, or one must find out about the different categories under which these services place themselves.

Lastly, Foursquare is a powerful tool for a Digital Agency because it gives information that the latter needs in order to improve businesses who are operations below their potential because they have not fully digitized their operations. In the end, this exercise was a great learning experience primarily because it showed me the difference data analysis could make in the real world.