## I. INTRODUCTION

In this project I will create a travel plan based on the best restaurants in the regions selected using the Foursquare data and Data Science tools.

### Problem description

Nowadays it is possible to find different types of tourism, for example, cultural tourism, rural tourism, sports tourism, among many others. Among these types of tourism you can also find gastronomic tourism, which consists of people traveling to certain places in search of experiencing different flavors and new cuisines.

Currently, people need to search the internet for reviews of reliable restaurants to define which restaurants they will do to in a certain city, in addition it is also necessary to create a complex travel plan that makes possible to go through all desired restaurants.

Some travel agencies already have gastronomic travel plans for those interested. However, not everyone relies on travel agencies when they plan their travels. To help these people, using the data that Foursquare offers, it is possible to help people plan their trips according to the best restaurants, pubs and coffee shops in the region. That way people could cut costs by booking rooms in hotels that are close to the best venues.

Travel agencies would also benefit from this solution. It is not just people looking for gastronomic tourism who are interested in eating well during trips. Having a pleasant gastronomic experience while traveling is a concern for many travelers, and this experience is reflected in reviews about trips and even reviews related to the agencies.

## II. DATA

The data that will be used in this project is from Foursquare. For the scope of this project I will use just Toronto and New York data. The data about Toronto and New York contains borough, neighborhood, postal code, latitude and longitude, as you can see in the following example.

| | Postal Code | Borough | Neighbourhood | Latitude | Longitude |
|---|---|---|---|---|---|
| 0 | M3A | North York | Parkwoods | 43.753259 | -79.329656 |
| 1 | M4A | North York | Victoria Village | 43.725882 | -79.315572 |
| 2 | M5A | Downtown Toronto | Regent Park, Harbourfront | 43.654260 | -79.360636 |
| 3 | M6A | North York | Lawrence Manor, Lawrence Heights | 43.718518 | -79.464763 |
| 4 | M7A | Downtown Toronto | Queen's Park, Ontario Provincial Government | 43.662301 | -79.389494 |

The Foursquare data that will be used you can find the location of the venue, the name and the venue category. For the scope of this project I will just use restaurants and pubs, basically all places that serve food. An example of Foursquare data can be seen below.

| | Neighborhood | Neighborhood Latitude | Neighborhood Longitude | Venue | Venue Latitude | Venue Longitude | Venue Category |
|---|---|---|---|---|---|---|---|
| 0 | Regent Park, Harbourfront | 43.65426 | -79.360636 | Roselle Desserts | 43.653447 | -79.362017 | Bakery |
| 1 | Regent Park, Harbourfront | 43.65426 | -79.360636 | Tandem Coffee | 43.653559 | -79.361809 | Coffee Shop |
| 2 | Regent Park, Harbourfront | 43.65426 | -79.360636 | Cooper Koo Family YMCA | 43.653249 | -79.358008 | Distribution Center |
| 3 | Regent Park, Harbourfront | 43.65426 | -79.360636 | Body Blitz Spa East | 43.654735 | -79.359874 | Spa |
| 4 | Regent Park, Harbourfront | 43.65426 | -79.360636 | Impact Kitchen | 43.656369 | -79.356980 | Restaurant |