EXPLORING TORONTO- By Yaswanth Gummadi

Background:

Toronto is the provincial capital of Ontario and the most populous city in Canada, with a population of 2,731,571 as of 2016. Current to 2016, the Toronto census metropolitan area (CMA), of which the majority is within the Greater Toronto Area (GTA), held a population of 5,928,040, making it Canada's most populous CMA. The city is the anchor of the Golden Horseshoe, an urban agglomeration of 9,245,438 people (as of 2016) surrounding the western end of Lake Ontario. Toronto is an international centre of business, finance, arts, and culture, and is recognized as one of the most multicultural and cosmopolitan cities in the world.

People have travelled through and inhabited the Toronto area, located on a broad sloping plateau interspersed with rivers, deep ravines, and urban forest, for more than 10,000 years. After the broadly disputed Toronto Purchase, when the Mississauga surrendered the area to the British Crown, the British established the town of York in 1793 and later designated it as the capital of Upper Canada. During the War of 1812, the town was the site of the Battle of York and suffered heavy damage by United States troops. York was renamed and incorporated in 1834 as the city of Toronto. It was designated as the capital of the province of Ontario in 1867 during Canadian Confederation. The city proper has since expanded past its original borders through both annexation and amalgamation to its current area of 630.2 km2 (243.3 sq mi).

The diverse population of Toronto reflects its current and historical role as an important destination for immigrants to Canada. More than 50 percent of residents belong to a visible minority population group, and over 200 distinct ethnic origins are represented among its inhabitants. While the majority of Torontonians speak English as their primary language, over 160 languages are spoken in the city.

Toronto is a prominent centre for music, theatre, motion picture production, and television production, and is home to the headquarters of Canada's major national broadcast networks and media outlets. Its varied cultural institutions, which include numerous museums and galleries, festivals and public events, entertainment districts, national historic sites, and sports activities, attract over 43 million tourists each year. Toronto is known for its many skyscrapers and high-rise buildings, in particular the tallest free-standing structure in the Western Hemisphere, the CN Tower.

The city is home to the Toronto Stock Exchange, the headquarters of Canada's five largest banks, and the headquarters of many large Canadian and multinational corporations. Its economy is highly diversified with strengths in technology, design, financial services, life sciences, education, arts, fashion, business services, environmental innovation, food services, and tourism.

Introduction of the Business Problem:

Creative Arts Inc. is a global company dedicated to the world of creative arts. In this modern age of 21st century driven by technology and blue-collar jobs, the world of creative arts is shrinking rapidly. The awareness among general population for the creative arts domain as a whole is decreasing. This is due to the lack of time in their busy schedules. The entire world is being driven on engineering, technology, healthcare etc. No one is being encouraged to the art of writing, painting, photography etc. Creative Arts Inc. was formed to revive the Creative arts domain. Here artists are encouraged to follow their passion and their work is displayed throughout the world at different events, conventions etc for fund raising, training and selling of

the work of artists. They leverage technology to get funds and revenues and to increase the awareness of the Creative Arts among general populace.

XYZ is a company based in Toronto for organizing events, currently it works on a project for Creative Arts Inc. to organize an event for 5 days for a group of artists from all over the world. The company has to put a good program, including a hotel of residence, a hall for meetings, places of landscape to visit, stores for shopping, restaurants and cafes. Artists generally prefer to get inspiration from their visits through the city. For example, parks or different landscapes have inspired many artists to capture the moments through photography, poetry and painting. So the company's purpose is to make a list of places of landscape in Toronto, including the nearest restaurants, cafes, and shopping stores for each place.

The ultimate challenge in this scenario is identifying places with close proximities. That means rather going to a park in a solitary location, artists would prefer to visit a park in the vicinity of restaurants, cafeterias, shopping malls etc so that they have huge activity in those places to derive proper inspiration and let their imagination go wild.

The stake holders in this project are diverse. The artists are obviously the main stakeholders. They would prefer to have info about places with common hangout spots. The general population would also prefer active places for hanging out or even for interacting with the artists. The client-Creative Arts Inc. would be having sufficient opportunities to display the work of their artists to larger client base and gather more sales. Even the hotels or any such new businesses would be preferring a larger footfall for their new business.

So our solution would presentable to all the above stake holders.

Data Description

We would many kinds of data for solving this problem. Most of the data is retrieved using the Foursquare API location Data.

For starters, we need Toronto location data. We would be getting the coordinates of the city of Toronto using geopy package in Python.

Then using those coordinates as reference points, we would be using the Foursquare API to retrieve different locations of hotels, parks, restaurants, cafeterias etc.

Then finally we would be plotting those points on a map using Folium package in Python to identify places with maximum activity for the artists attending the event.