

Capstone Project: Battle of the Neighborhoods - Post Apocalypse Scenario

Introduction

Suppose it is your first time visiting a city that you are not geographically familiar with. From the moment you arrived, every person you met was very welcoming as was the vibe of the atmosphere, the appetizing food aroma and flavours from every food corner and restaurants you passed by on the way to your 5 stars hotel. After a long flight, you decided to take a warm bath and suggested you deserved a short nap, just enough to energize yourself so you could enjoy the rest of the day.

Just after the alarm you set went off, your vacation turned into a post apocalypse event and you have just missed your ticket to safety! In other words, you are left alone.

Business Problem

Without anyone or anything but your phone or laptop, can you increase the chance of your survival with the power of Data Science? Namely, on helping you to make a data-driven decision upon choosing the best location to set up your camp, without any idea when help will arrive?

Let us make a checklist on what facilities should a location have nearby to make it a good candidate:

- Supermarkets or malls for overall supplies such as food, water, and clothing
- Restaurants mainly for food supplies
- Medical facilities such as hospitals and pharmacies
- Gasoline stations for transport and electricity generators
- Bodies of water nearby assuming when there is water there is life. It can also be a good source of fresh water and food.
- Vegetation having the same assumption as the previous point.

The more facilities and sources of these kinds nearby a location, the more efficient we can tend to our daily needs to survive. Now, feel free to add any ideas that I might have missed in our checklist. Remember, Team-work is dream-work!

Data Description and Usage

For this project, I chose Toronto, Canada as the location of interest for I was supposed to visit the city this year (2020) but the pandemic made it impossible.

Data Source	Description	Usage
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https://en.wikipedia.org/wiki/List_of_postal_codes_of_Canada:_M	Contains a list of postal codes in Canada within the city of Toronto.	The page was scraped using beautiful soup to build the dataset necessary for the analysis.
Geospatial_Coordinates.csv	Contains the longitude and latitude of each postal code.	The dataset was put into a data frame and merged with the data frame containing the postal codes
Foursquare API	The API is a source of sets of addresses in any defined location.	The API is used to get the facilities in each neighborhood.