Capstone Project - The Battle of Neighborhoods (Week 1)

**Applied Data Science Capstone by IBM/Coursera**

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**Descriptions**

The present task has two main purposes

1. A description of the problem and a discussion of the background

We crossed the year 2020 and arrived in 2021 three days ago. These times has been marked by the covid19 pandemia. Possibly every country in the world will erect a monument to the victims of the disease. In this work, an obelisk memorial will be “located” near the avenue Roselawn in Toronto, Canada.

The location was carried out a priori, the maps and places of daily interest were structured using the FourSquare platform. However, this platform does not offer suggestions for visiting points related to the historical memory of places, but for utilitarian purposes of services. Anyway, the locations offered by FourSquare are extremely useful because they can be associated with any other purpose. Thus, clustering was used to highlight the venues located near the obelisk memorial.

1. A description of the data and how it will be used to solve the problem

The data for carrying out the task were taken from the World Health Organization (WHO) website and from the Segmenting and Clustering Neighborhoods in Toronto.   
The data consists of names and geographical coordinates related to venues in Toronto, to allow the location of a monument in honor to the victims of the covid19. Based on the data, dataframes were organized and, using two clustering schemes, a place in near Roselawn Ave was positioned on a map to raise the obelisk.

Each step is documented on the notebook under the following headings:

* Memorial obelisk near Roselawn Ave,Toronto, honoring victims of covid19
* Data collection and Dataframes
* Neighbourhood Geolocalization and mapping
* The 100 important venues in centre of Toronto
* Including Covid19 Memorial Obelisk geolocalization, nearby Roselawn Ave
* Most common venues grouped by neighbourhood
* Clustering
* Localization of the Toronto Covid19 Memorial Obelisk

**Bibliography**

AURA

<http://www.auraforrefugees.org>

Clustering GPS Coordinates and Forming Regions with Python

<https://levelup.gitconnected.com/clustering-gps-co-ordinates-forming-regions-4f50caa7e4a1>

# Roselawn

# <https://www.portcolborne.ca/en/recreation-and-leisure/roselawn.aspx>

# Segmenting and Clustering Neighborhoods in New York City

# <https://labs.cognitiveclass.ai/tools/jupyterlab/lab/tree/labs/DS0701EN/DS0701EN-3-3-2-Neighborhoods-New-York-py-v1.0.ipynb?lti=true>

# Segmenting and Clustering Neighborhoods in Toronto

# <https://www.coursera.org/learn/applied-data-science-capstone/peer/I1bDq/segmenting-and-clustering-neighborhoods-in-toronto>

WHO Coronavirus Disease (COVID-19) Dashboard

<https://covid19.who.int>