The Battle of Neighborhoods

Introduction:

The motive of this challenge is to help people in exploring better centres around their neighbourhood. It will help people making a clever and efficient selection on selecting extremely good neighbourhood out of numbers of different neighbourhoods in Scarborough, Toronto.

Lots of humans are migrating to numerous states of Canada and needed lots of research for exact housing costs and reputed colleges for their children. This project is for those folks that are looking for better neighbourhoods. For ease of getting access to Cafe, School, Supermarket, medical shops, grocery shops, mall, theatre, hospital, like-minded people, etc.

This project ambitions to create an evaluation of capabilities for a people migrating to Scarborough to look the excellent neighbourhood as a comparative analysis between neighbourhoods. The features consist of median housing fee and higher school in keeping with ratings, crime rates of that particular location, avenue connectivity, climate conditions, good management for an emergency, water resources both sparkling and wastewater and excrement conveyed in sewers and recreational facilities.

It will assist people to get the attention of the location and neighbourhood earlier than transferring to a new city, state, us of a or area for his or her paintings or to start a new fresh life.

Problem to be solved:

The major cause of this assignment is to signify a better neighbourhood in a new town for the person who is transferring there. Social presence in society in phrases of like-minded people. Connectivity to the airport, bus stand, metropolis centre, markets and other daily needs things nearby.

Sorted list of the residence in terms of housing charges in an ascending or descending order

Sorted listing of colleges in terms of region, fees, rating and reviews

The Location:

Scarborough is a famous destination for new immigrants in Canada to reside. As a result, it's far one of the most numerous and multicultural areas in the Greater Toronto Area, being home to various religious groups and locations of worship. Although immigration has ended up a hot topic during the last few years with greater governments in search of more restrictions on immigrants and refugees, the general fashion of immigration into Canada has been considered one of on the rise.

Foursquare API:

This task could use Four-square API as its prime information amassing source as it has a database of tens of millions of places, particularly their places API which offers the ability to carry out vicinity search, place sharing and details about a business.

Work Flow:

Using credentials of Foursquare API capabilities of near-by using places of the neighbourhoods could be mined. Due to Http request boundaries, the number of places per neighbourhood parameter might reasonably be set to one hundred and the radius parameter could be set to 500.

Clustering Approach:

To compare the similarities of two cities, we decided to explore neighbourhoods, section them, and institution them into clusters to discover comparable neighbourhoods in a massive city like New York and Toronto. To be capable of doing that, we need to cluster statistics that's a shape of unsupervised gadget learning: a k-approach clustering algorithm

Libraries Which are Used to Develop the Project:

Pandas: For developing and manipulating dataframes.

Folium: Python visualization library might be used to visualise the neighbourhoods cluster distribution of the use of interactive leaflet map.

Scikit Learn: For uploading k-way clustering.

JSON: Library to handle JSON files.

XML: To separate facts from presentation and XML stores information in plain textual content format.

Geocoder: To retrieve Location Data.

Beautiful Soup and Requests: To scrap and library to deal with HTTP requests.

Matplotlib: Python Plotting Module.