Introduction

in this project we will be exploring the data on different restaurants in the neighbourhood of New York city. And try to find the best place in the neighbourhood to start a new resturant.so that it will be helpful for someone.

Business Problem.

New York is a densely populated borough, one of the most developed, most commercial and financial center. which has huge number of restaurants on every street. So it becomes very hard to find the best place to open a restaurant where you can make some revune. A stake holder wants to open a new restaurant in the neighbourhood of New York city.so he wants to find the best place for it as there are loft of restaurants and its very competitive for restaurants in newyork city. Also they want to make good revenue from the restaurant.

Target Audience

This project is suitable for all the stakeholders who is trying find a best place to open a restaurant in the neighbourhood of newyork city where they can gain maximum amount of profit.

Data Description

in this project we will be working with newyork city's data about postcodes, neighbourhoods, brough, longitude, latitude and restaurant places. so we need geographical data, demographic data and four square api data about restaurant avenues.

Data 1: newyork has total of 5 boroughs and 306 neighborhoods. In order to segment the neighbourhoods and explore them, we will essentially need a dataset that contains the 5 boroughs and the neighbourhoods that exist in each borough as well as the latitude and longitude coordinates of each neighborhood. We can find the dataset at https://geo.nyu.edu/catalog/nyu_2451_34572.which has been downloaded and saved on a server.so we can acess data throught this command !wget -q -O 'newyork_data.json' https://cocl.us/new_york_dataset.

Data 2 : we need longitude and latitude data .ew cna get it from geopy library.

Data 3: we need the data about differetn resturant venues in the newyork city neighborhoods. We can get from the four square api from the following url
https://foursquare.com/explore?mode=url&near=New%20York%2C%20NY%2C%20United%20States&nearGeoId=72057594043056517&q=Restaurant.
we have to clean all the datasets and convert them into dataframes in order to perform analysis.

Methodology: the Data was downloaded from the links and files provided above. Have been cleansed and merged for analysis purposes. The data from the fourse square api has been organised and converted into Dataframe. folium maps have been used for visualizations as they are best for interactive maps. k means method have been used to identify the clusters

Discussion: A folium map of different restaurants around the neighbourhood of newyork city .from the visualization we can identify that there are more number of restaurants in

Results: From the visualization we can say that there are lot of restaurant in the neighbourhoods of new York. We can find the neighbourhood which has more number of resturants and pick that neighbourhood as the best place to start a new restaurant.