

Capstone Project – Battle of Neighborhoods (Week 1)

1) Introduction

According to the data from U.S. Census Bureau, an average person in U.S. moves more than 11 times in his/her lifetime. This shows that people are not really satisfied with the place where they decide to live. Hence it is really important for people to choose their neighborhoods carefully after doing a lot research, so that they are satisfied in where they decide to move in. When we are looking for living in a new place the first concern that most of the people have is the safety. The neighborhood that is not safe and has a high crime rate is not really fit for living and has large scale implications on people's lives.

Therefore keeping this principle in mind I have prepared this project which will help people to make this important decision and will help them to save a lot of time and money.

2) Business Problem

The problem is to determine the safest neighborhoods in New York for living. This will be determined by using the dataset that is freely available at the official website of New York City. The link of the data is here ([NYC crime data](#)). As this is a very large dataset containing records for more than 1 year we will be taking the data for the first quarter of the year 2020 i.e. from Jan 2020 – Mar 2020. Along with this dataset I will also be using the New York geo JSON file which was provided in one of the Labs of this course ([New York geo json](#)). This file contains all Neighborhoods, Boroughs and their geographical coordinates.

After processing the Crime data I will be merging it with the neighborhood dataframe created from the above geojson file. And then finally I will be working on this combined dataset.

The aim of this project is to first find the safest neighborhoods and then by using Foursquare location dataset determine the 10 most common venues in each neighborhood and then finally dividing it into clusters using k-means clustering algorithm

3) Interested Audience

This model will be useful to the people who are looking to re-locate or settle in New York City. It can also help the real estate agents or companies to find the best neighborhoods for their clients to live in.