

CAPSTONE PROJECT

THE BATTLE OF NEIGHBOURHOODS

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1. Introduction

1.1 Background

The average American moves about eleven times in their lifetime. This brings us to the question: Do people move until they find a place to settle down where they truly feel happy, or do our wants and needs change over time, prompting us to eventually leave a town we once called home for a new area that will bring us satisfaction? Or, do we too often move to a new area without knowing exactly what we're getting into, forcing us to turn tail and run at the first sign of discomfort? To minimize the chances of this happening, we should always do proper research when planning our next move in life. Consider the following factors when picking a new place to live so you don't end up wasting your valuable time and money making a move, you'll end up regretting. Safety is a top concern when moving to a new area. If you don't feel safe in your own home, you're not going to be able to enjoy living there.

1.2 Problem

The crime statistics dataset of London found on Kaggle has crimes in each Boroughs of London from 2008 to 2016. The year 2016 being the latest we will be considering the data of that year which is actually old information as of now. The crime rates in each borough may have changed over time. This project aims to select the safest borough in London based on the total crimes, explore the neighbourhoods of that borough to find the 10 most common venues in each neighbourhood and finally cluster the neighbourhoods using k-mean clustering.

2. Data

2.1 Data Acquisition

The data acquired for this project is a combination of data from three sources. The first data source of the project uses a London crime data that shows the crime per borough in London.

2.2 Data Cleaning

The data preparation for each of the three sources of data is done separately. From the London crime data, the crimes during the most recent year (2016) are only selected