

Mapping High Crime Areas to aid Smart Law Enforcement

Introduction

Where the crime rates of New York have been on a declining trend since 1940s, some neighborhoods still experience high rates of crime. So the question becomes how to use the scarce resources to effectively resolve the problem in the most efficient manner? For addressing this question, I'll highlight areas with highest crime rates, identify which areas have a specific type of crime (e.g. sexual, homicide etc.) so that targeted interventions can be instituted, and what are the common attributes of the venues around those neighborhoods so that an association can be established to predict which areas can be at risk of such crimes.

Data

For answering the three questions, I will be using two datasets:

- 1) New York Arrest Data <https://data.cityofnewyork.us/Public-Safety/NYPD-Arrest-Data-Year-to-Date-/uip8-fykc/data>
 - a. NYC Open Data provides the Arrest Data. This is a breakdown of every arrest effected in NYC by the NYPD during the current year. This data is manually extracted every quarter and reviewed by the Office of Management Analysis and Planning. Each record represents an arrest effected in NYC by the NYPD and includes information about the type of crime, the location and time of enforcement.

This will be used to map high crime areas and the types of crimes specific to some areas

- 2) Foursquare Location Data
 - a. Foursquare provides details about places – type, location, and similar venues in the neighborhood.

This data will be used to find common attributes in venues around those neighborhoods so that factors can be identified, if any, to predict the outbreak of a specific type of crime (if it is related to some area)