Final Project Proposal - DATA 608

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Project Background

I will be utilizing the the NYPD Shooting Incident Data dataset which includes list of every shooting incident that occurred in NYC going back to 2006 through the end of the previous calendar year.

This is a breakdown of every shooting incident that occurred in NYC going back to 2006 through the end of the previous calendar year. This data is manually extracted every quarter and reviewed by the Office of Management Analysis and Planning before being posted on the NYPD website. Each record represents a shooting incident in NYC and includes information about the event, the location and time of occurrence. In addition, information related to suspect and victim demographics is also included. This data can be used by the public to explore the nature of shooting/criminal activity.

Goal of the project will be to see what factors are involved and which trends are seen in gun violence for NYC We are provided with many data points such as location, race, gender and date of occurrence.

Data Sources

https://data.cityofnewyork.us/Public-Safety/NYPD-Shooting-Incident-Data-Historic-/833y-fsy8
(https://data.cityofnewyork.us/Public-Safety/NYPD-Shooting-Incident-Data-Historic-/833y-fsy8)

```
df1 <- read.csv("https://raw.githubusercontent.com/johnm1990/DATA608/main/NYPD_Shooting_Incident
_Data__Historic_.csv")

head(df1)
```

```
##     INCIDENT_KEY OCCUR_DATE OCCUR_TIME          BORO PRECINCT JURISDICTION_CODE
## 1      201575314 08/23/2019   22:10:00        QUEENS      103                 0
## 2      205748546 11/27/2019   15:54:00         BRONX       40                 0
## 3      193118596 02/02/2019   19:40:00     MANHATTAN       23                 0
## 4      204192600 10/24/2019   00:52:00 STATEN ISLAND      121                 0
## 5      201483468 08/22/2019   18:03:00         BRONX       46                 0
## 6      198255460 06/07/2019   17:50:00      BROOKLYN       73                 0
##     LOCATION_DESC STATISTICAL_MURDER_FLAG PERP_AGE_GROUP PERP_SEX      PERP_RACE
## 1                                   false
## 2                                   false            <18        M          BLACK
## 3                                   false          18-24        M WHITE HISPANIC
## 4     PVT HOUSE                      true          25-44        M          BLACK
## 5                                   false          25-44        M BLACK HISPANIC
## 6                                   false          45-64        M WHITE HISPANIC
##   VIC_AGE_GROUP VIC_SEX      VIC_RACE X_COORD_CD Y_COORD_CD Latitude Longitude
## 1         25-44       M         BLACK    1037451     193561 40.69781 -73.80814
## 2         25-44       F         BLACK    1006789     237559 40.81870 -73.91857
## 3         18-24       M BLACK HISPANIC     999347     227795 40.79192 -73.94548
## 4         25-44       F         BLACK     938149     171781 40.63806 -74.16611
## 5         18-24       M         BLACK    1008224     250621 40.85455 -73.91334
## 6         25-44       M         BLACK    1009650     186966 40.67983 -73.90843
##                                       Lon_Lat
## 1 POINT (-73.80814071699996 40.697805308000056)
## 2  POINT (-73.91857061799993 40.81869973000005)
## 3 POINT (-73.94547965999999 40.791916091000076)
## 4  POINT (-74.16610830199996 40.63806398200006)
## 5  POINT (-73.91333944399999 40.85454734900003)
## 6  POINT (-73.90842523899994 40.67982701600005)
```

The datasource is from DATA.CITYOFNEWYORK, some parameters include borough, timeframe(back to 2006 through the end of the previous calendar year). Data shows many helpful insights on discovering which boroughs are most affected and how frequent this violence occurrs. Please view a "head" section of the data

Supplementary Data

There exist structures in city government to combat this kind of violence such as NYC Office to prevent gun violence. Although gun violence has decreased to historically low levels in recent years, it remains a pervasive issue in small pockets of neighborhoods around New York City. The data shows that a limited number of communities have accounted for roughly 50% of NYC's shooting incidents.

In 2014, the NYC Council and the de Blasio administration launched the NYC Crisis Management System (CMS). This initiative simultaneously operates across 22 communities citywide in neighborhoods significantly impacted by gun violence and provides violence intervention and support systems. CMS consists of more than 50 community-based organizations providing various services to support those at the highest risk.

Research has shown that when individuals closest to the issues are an integral part of the development and implementation of solutions, legitimacy and sustained norm change is possible. Through the de Blasio administration's investment in the data-driven, community-based strategies, these facts continue to be affirmed through the Office to Prevent Gun Violence (OPGV).

Analysis and Visualization

A shiny app will be utilized to view the distribution of gun violence in nyc. This will help to visualize any patterns.

Possibly useful libraries

```
knitr
plyr
dplyr
sqldf
data.table
DT
kableExtra
ggplot2
reshape2
ggplot2
plotly
graphics
```