Project title：NYC Shooting Map on Density and Related Factors.

Yu He (yh3430), Wenshan Qu (wq2160), Jiayao Sun (js5962), Yimiao Pang (yp2608), Yunxi Zhang (yz4186)

- The motivation for this project

According to the New York Post, data from the New York City Police Department shows that as of December 7, 2020, there have been 1,433 shootings in New York City, with a total of 1,756 victims of gun violence, almost twice the number in the same period in 2019. The surge in shootings is jeopardizing the rights of the public. We need immediate action to ensure a safe living environment for our community.

- The intended final products

The final product is intended to be a website including interactive design “NYC Shooting Map " and some informative data with analysis. The interactive design is created for travelers or residents who are willing to visit New York City and want to get some information about shooting crime in specific areas. Visitors can input the zip code to get shooting density information showing on the NYC map with the estimated most likely month and daytime for a shooting event. For the data analysis part, we intend to visualize the relationship between *shooting crime* and *time*, *age, sex, race,* and also conduct statistical analysis. Under this covid pandemic, we would also like to analyze the effect of covid-19 on the shooting crime circumstance in pre-pandemic and post-pandemic period.

- The anticipated data sources

https://data.cityofnewyork.us/Public-Safety/NYPD-Shooting-Incident-Data-Year-To-Date-/5ucz-vwe8
https://data.cityofnewyork.us/Public-Safety/NYPD-Shooting-Incident-Data-Historic-/833y-fsy8

Our group chooses NYPD Shooting Data (Year to Date) and NYPD Shooting Incident Data (Historic) on the NYC Open Data website as the population. The data records all shooting incidents in NYC from 01/01/2006 until now. The combined data contains 19 columns and around 23.8k rows in total. Each record is a shooting incident with information such as locations, time to the minute, Perpetrator’s description, victim’s description, etc.

- The planned analyses/visualizations/coding challenges

The reasonable and moderate filtration of such a large database;
Transformation of given geography information to zip code;
Using GPS information to construct a real-time interactive product;
Making a handy and accessible interactive page without losing it’s informative purpose.

- The planned timeline:
    - November 16 to 21 (week 1) project reviewing with Dr. Jeff Goldsmith, group discussion about data manipulation and project goal
    - November 22 to 28 (week 2) data selection and manipulation
    - November 29 to December 5 (week 3) visualization and website building
    - December 6 to December 11 (week 4) website building and report writing