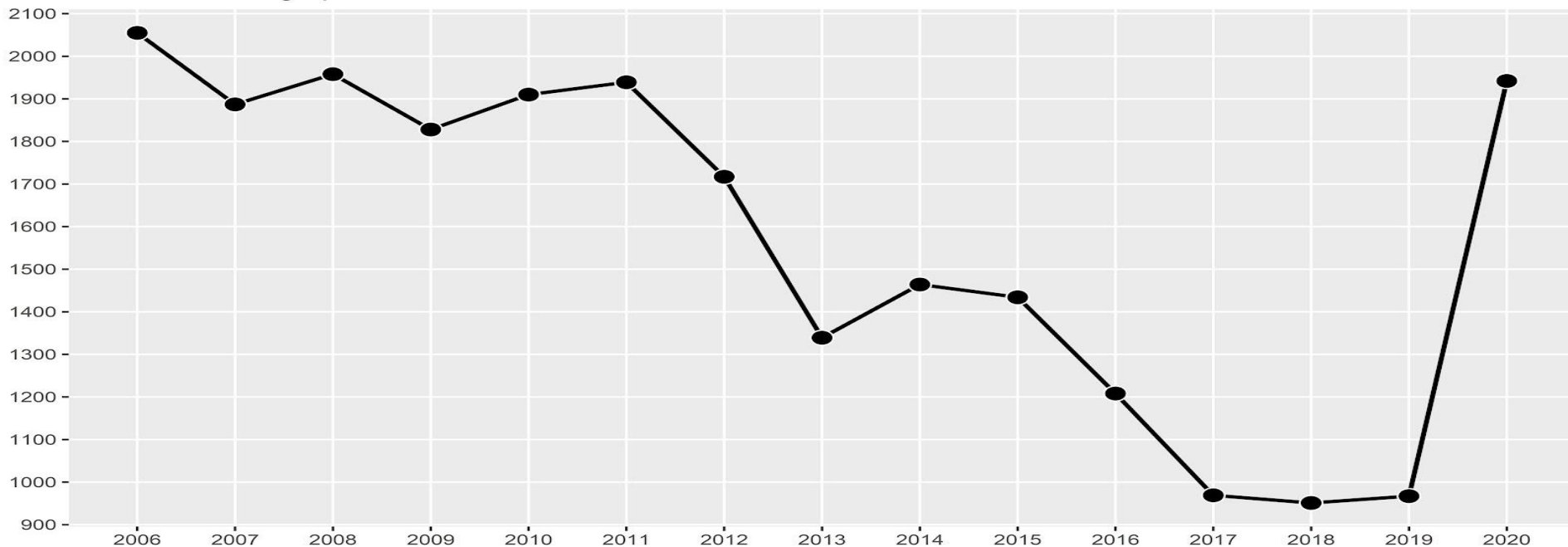


NYPD Shooting Incident Data

2006 thru 2021

NYPD Shootings per Year



Introduction

- NYPD Shooting Incident Data 2006 - 2021:
 - This data includes every shooting incident that occurred in NYC from 2006 thru the end of 2021.
 - April 12th, 2022 - Brooklyn Subway shooting
 - 23182 Males were involved in shooting incidents while only 2403 females were involved
 - Perspective: .52% of the bronx population were involved in a shooting incident, .39% for brooklyn, .21% for Manhattan, .16% for queens and .15% for Staten Island.
 - Who are most at risk of becoming victims of a shooting incident?

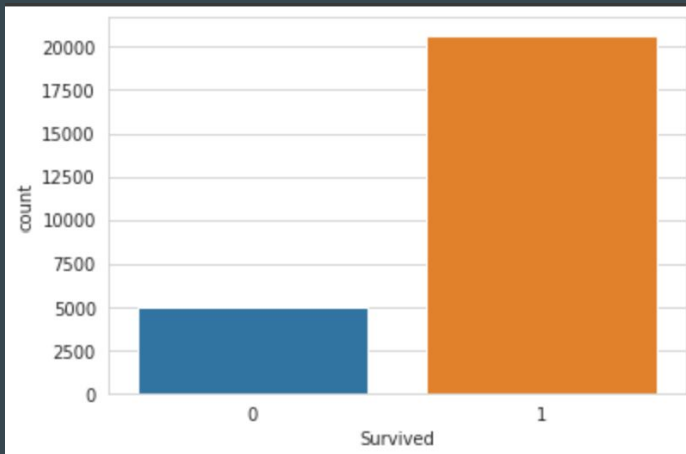
Data Sources

The data used for this analysis was retrieved from the NYC Open Data website.
The data included 25596 rows and 19 columns.

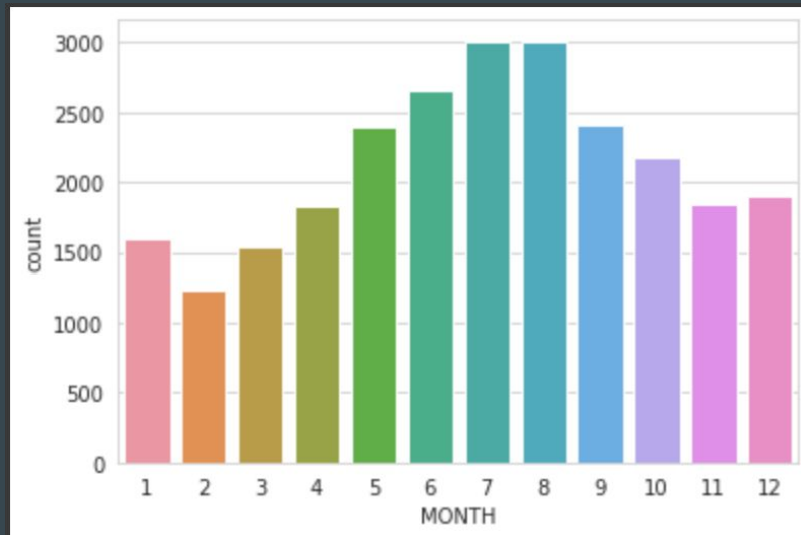
INCIDENT_KEY	OCCUR_DATE	OCCUR_TIME	BORO	PRECINCT	JURISDICTION_CODE	LOCATION_DESC	STATISTICAL_MURDER_FLAG	PERP_AGE_GROUP	PERP_SEX	PERP_RACE	VIC_AGE_GROUP	VIC_SEX	VIC_RACE	X_COORD_CD	Y_COORD_CD	La
236168668	11/11/2021	15:04:00	BROOKLYN	79	0.0	NaN	false	NaN	NaN	NaN	18-24	M	BLACK	996313.0	187499.0	40.6813
231008085	07/16/2021	22:05:00	BROOKLYN	72	0.0	NaN	false	45-64	M	ASIAN / PACIFIC ISLANDER	25-44	M	ASIAN / PACIFIC ISLANDER	981845.0	171118.0	40.6363
230717903	07/11/2021	01:09:00	BROOKLYN	79	0.0	NaN	false	<18	M	BLACK	25-44	M	BLACK	996546.0	187436.0	40.6811
237712309	12/11/2021	13:42:00	BROOKLYN	81	0.0	NaN	false	NaN	NaN	NaN	25-44	M	BLACK	1001139.0	192775.0	40.6957
224465521	02/16/2021	20:00:00	QUEENS	113	0.0	NaN	false	NaN	NaN	NaN	25-44	M	BLACK	1050710.0	184826.0	40.6737
228252164	05/15/2021	04:13:00	QUEENS	113	0.0	NaN	true	NaN	NaN	NaN	25-44	M	BLACK	1051329.0	196646.0	40.7061
226950018	04/14/2021	21:08:00	BRONX	42	0.0	COMMERCIAL BLDG	true	NaN	NaN	NaN	18-24	M	BLACK	1009489.0	243050.0	40.8337
237710987	12/10/2021	19:30:00	BRONX	52	0.0	NaN	false	NaN	NaN	NaN	25-44	M	BLACK	1017440.0	256046.0	40.8694
224701998	02/22/2021	00:18:00	MANHATTAN	34	0.0	NaN	false	NaN	NaN	NaN	25-44	M	BLACK HISPANIC	1005426.0	254690.0	40.8657
225295736	03/07/2021	06:15:00	BROOKLYN	75	0.0	NaN	true	25-44	M	BLACK HISPANIC	25-44	M	WHITE HISPANIC	1020492.0	187865.0	40.6822

Methodologies

- The programming language used was python in google colab.
- To analyse the NYPD Shooting Data a few different libraries were imported in google colab notebook. Those are: numpy which is good for performing mathematical operations, pandas - to analyse, clean, and manipulate the data, seaborn & matplotlib to explore, understand and create visualizations.
- The datetime module was also imported to manipulate date and time.



Graph showing # of victims who survived(1) a shooting incident vs those who didn't (0). More than half of the victims survived.

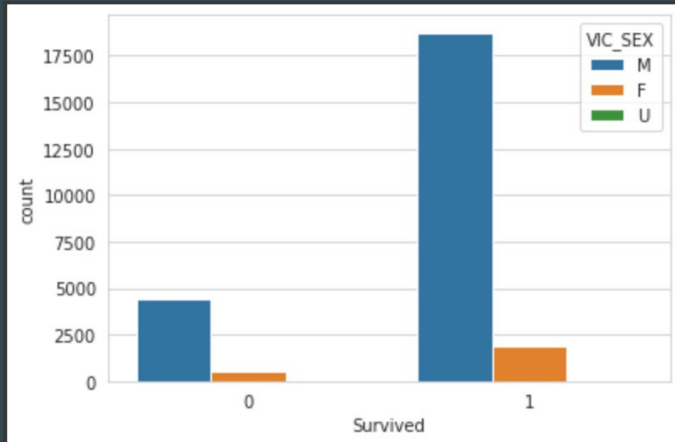


Graph showing # of shooting incidents by month

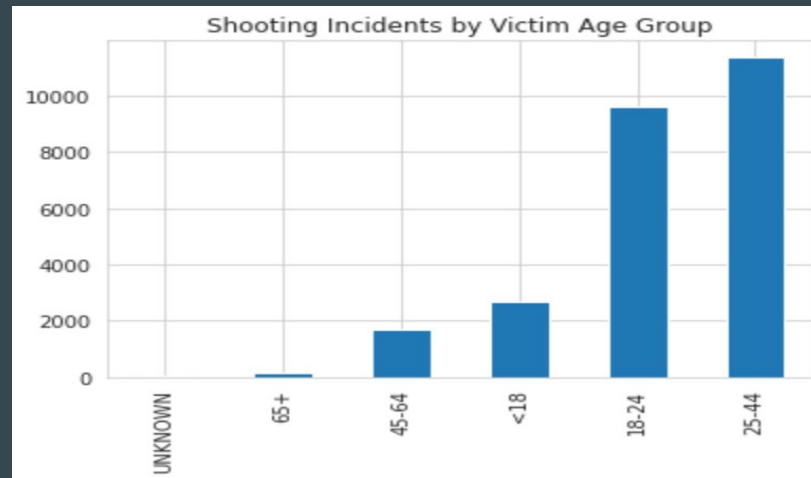
2018	958
2019	967
2017	970
2016	1208
2013	1339
2015	1434
2014	1464
2012	1717
2009	1828
2007	1887
2010	1912
2011	1939
2020	1948
2008	1959
2021	2011
2006	2055

Table showing # of shooting incidents by year

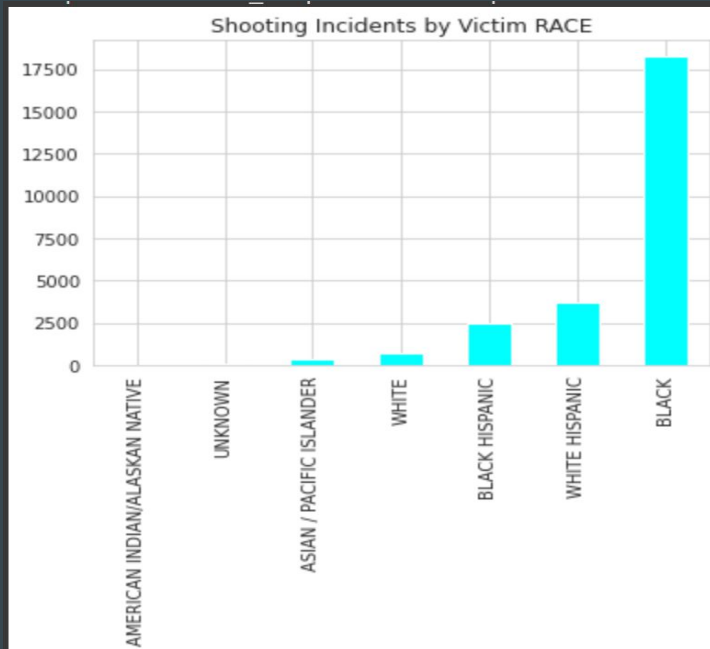
Visualization



The graph above shows victims who survived vs who didn't with 1=survived, 0=death by sex.



Graph showing # of shooting incidents by age group.



Graph showing # of shooting incidents by race.

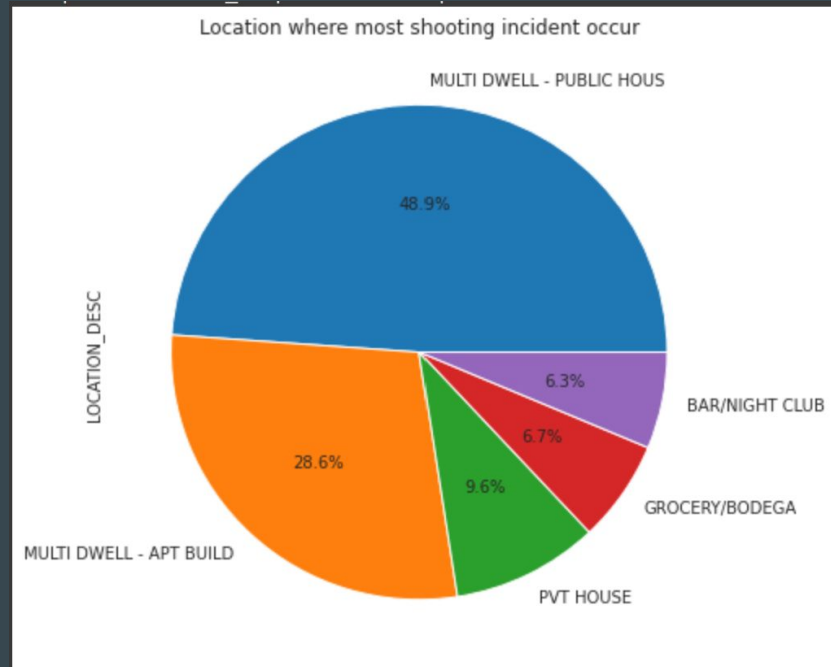


Chart showing the top 5 places where most shooting incident occurred.

Conclusions

- Those mostly to be at risk of a shooting incident are:
 - Race = Black
 - Age group = 25 -44 & 18-24
 - Gender = Male
 - Boro = Brooklyn
 - live or spend more time in Multi dwell - public housing
- Most shooting incidents occurred in Multi dwelling public housing and apt building and private houses. This tells me that these incidents mostly happen among people who know each other either personally or by some other means. Home is suppose to be a place we go to to feel safe, however this analysis tells me that we need to be more cautious at home.
- In the year 2017, 2018 & 2019 shooting incident rates were below 1000 incidents, in 2020 the height of the pandemic shooting incidents increase 100% to a whopping 1948 and in 2021 increased again to 2011 shooting incidents.
- Most shooting incidents occurs late at night and early morning. Incidents increase during summer months and tends to be lower in the winter and colder months.
- Good news: 80.7% of victims of a shooting incident survived.

References

<https://data.cityofnewyork.us/Public-Safety/NYPD-Shooting-Incident-Data-Historic-/833y-fsy8> - data source

<http://www.citypopulation.de/en/usa/newyorkcity/> - use to find out the population for each boro

<https://andrewpwheeler.com/2021/02/02/the-spatial-dispersion-of-nyc-shootings-in-2020/> - First image