NYPD Shooting Incident Data

Exploratory Analysis: (2006-2021)

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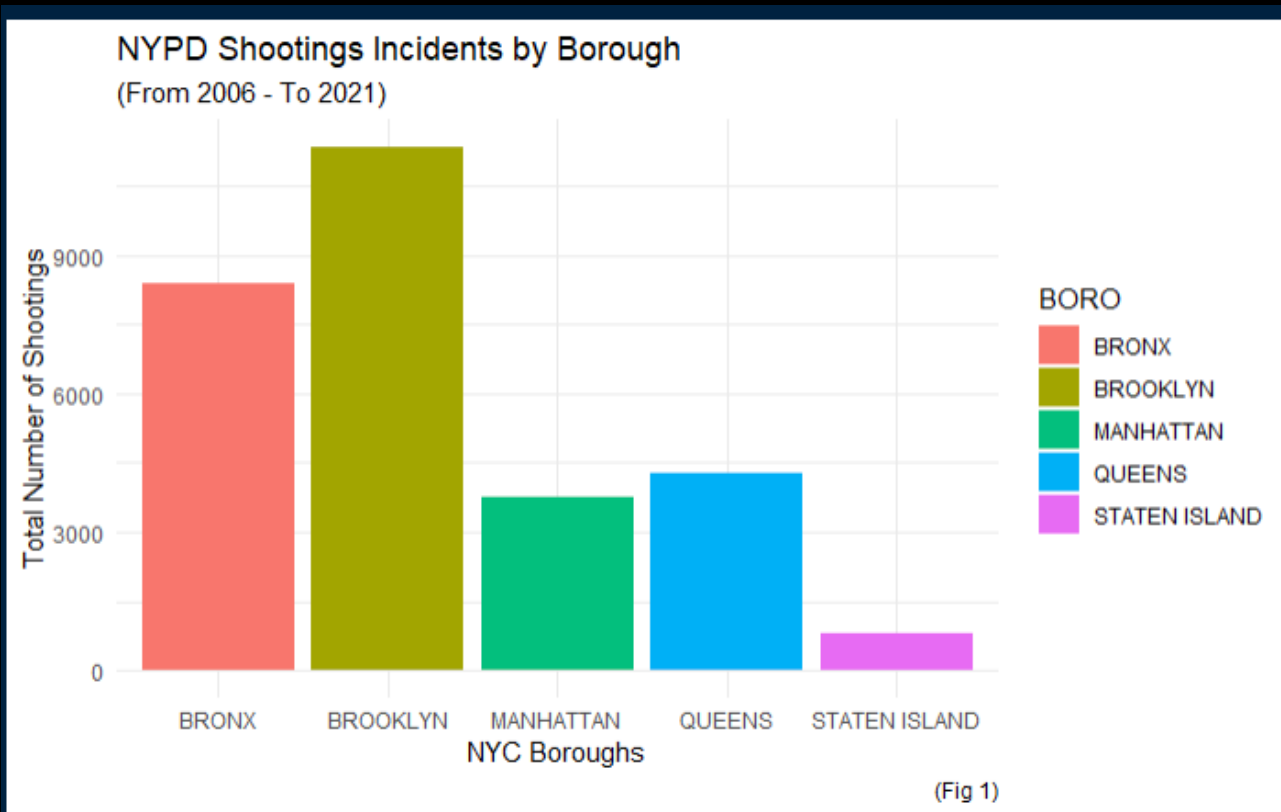Date: March 17, 2025

Data Source

- NYC Open Online Data: NYPD Shooting Incident Data
  - Time Range: 2006–2021
  - Fields: Date, Time, Borough, Victim Info, etc.
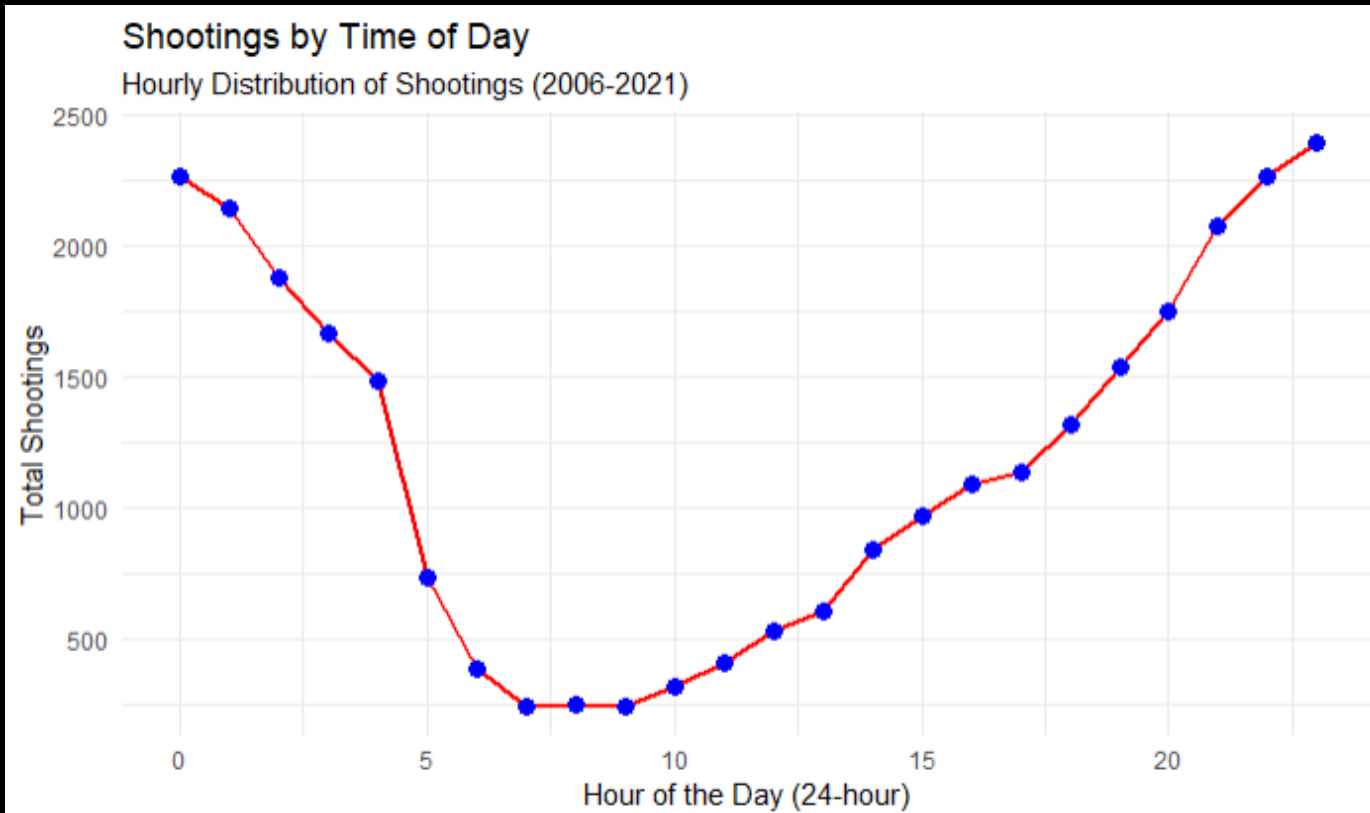 - Over 25,000+ shooting records

Data Cleansing & Preparation

- Parsed dates and times (lubridate)

- Converted categorical variables (race, sex, borough)

- Extracted features: year, month, hour

- Created 'Shootings' count column
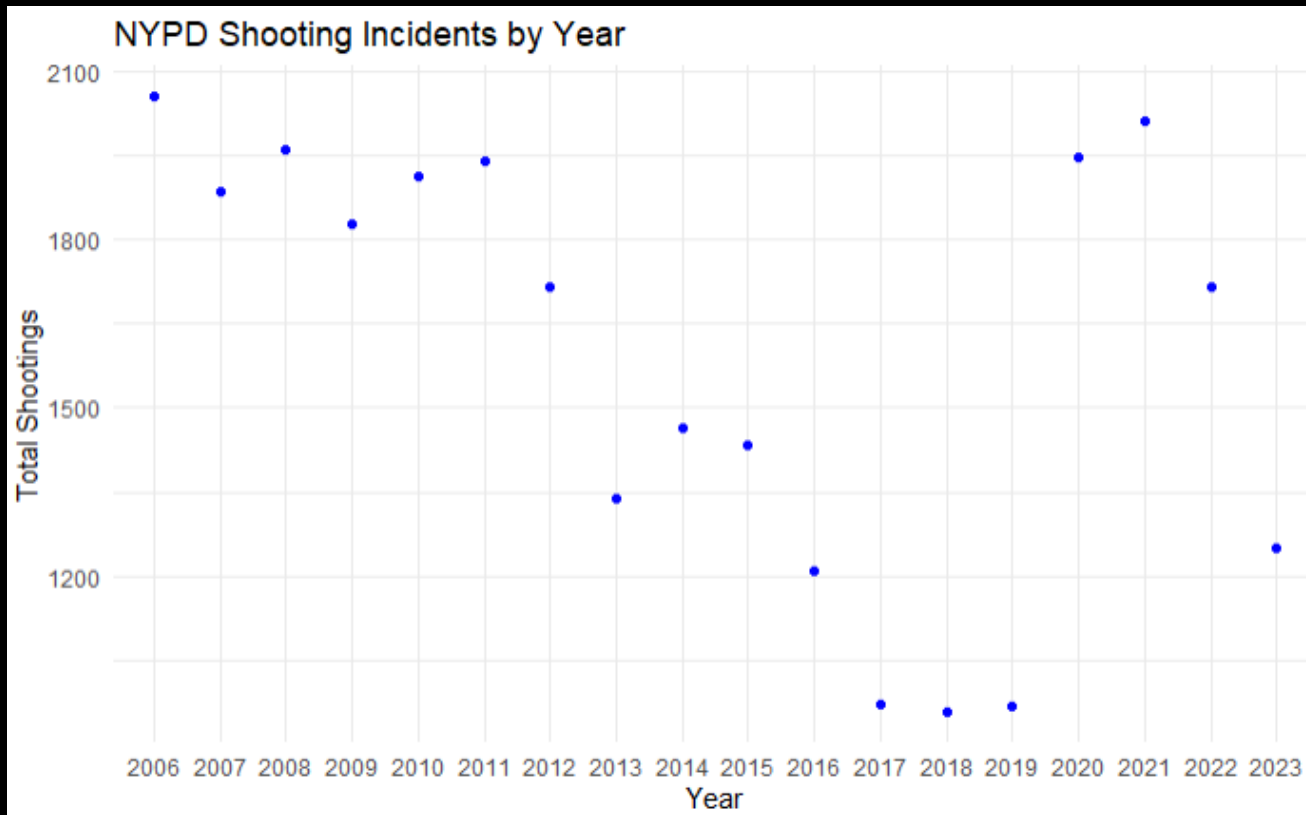
Borough-wise Shootings

NYPD Shootings Incidents by Borough
(From 2006 - To 2021)

(Fig 1)

- Brooklyn and Bronx top the list
- Staten Island had the fewest shootings
- Visualized using ggplot2 bar chart

Shootings by Time of Day

Shootings by Time of Day
Hourly Distribution of Shootings (2006-2021)

- Peak around late night and early morning
- Consistent drop during early morning hours
- Red line + blue points = trend + exact counts

Shootings by Year

NYPD Shooting Incidents by Year

- Fluctuations over time
- Spike in some years, drop in others
- COVID-19 era (2020–2021) saw a dip

Conclusions & Observations

- Brooklyn & Bronx: highest incident rates

- Peak hours: late night

- COVID likely impacted 2020 data

- Reporting bias possible (hospital data missing)

- Population growth not accounted for

Thank you!

- Thanks for Watching! - If you have any queries or doubts or would like to explore the code, I've linked the resources below on the github