

NYPD Arrest Data

Causes, Effects, and the Effect on the U.S Job Economy



Introduction

- New York City has a total of 5 boroughs (Bronx, Queens, Manhattan, Brooklyn & Staten Island)
- A city with a diverse and dense population
- There's been a rise in street crimes that created anxiety and problems among New Yorkers (Lopez, 2022)



AGENDA

Our client and our focus

In depth look at the crimes committed

Conclusion and recommendation

Q&A



Our Client & Our Focus



Client:

- Mayor of New York - Eric Adams
 - He was an NYPD before he became mayor
 - Campaigned to fight against crime to keep New York Safe
- Noticed an increase in crime rates
- Eric Adams wants to know how his team can decrease crime rates in NYC to make it safe for residents and visitors



Our Focus:

- The types of crime committed in each borough
- Are there any patterns in the crimes committed? Who commits the crime?
- What is causing the increase in crime rates?
- Coming up with useful insights and recommendations for our client

Take effective measures to reduce the likelihood of delinquency and criminal behavior while implementing practical safety measures for neighborhoods with high crime rates



In Depth Look at The Boroughs & Crimes



Dataset

Dataset Features & Key Terms

Provided by: NYC Open Data Website
NYPD Arrest Data (Year to Date)

- Used Tableau and Python to clean and organize data
- Created visualization using Tableau, Excel, and Pandas-Python

Column Name	Description	Type
ARREST_KEY	Randomly generated persistent ID for each arrest	Plain Text
ARREST_DATE	Exact date of arrest for the reported event	Date & Time
PD_CD	Three digit internal classification code (more granular than Key Code)	Number
PD_DESC	Description of internal classification corresponding with PD code (more granular than Offense Description)	Plain Text
KY_CD	Three digit internal classification code (more general category than PD code)	Number
OFNS_DESC	Description of internal classification corresponding with KY code (more general category than PD description)	Plain Text
LAW_CODE	Law code charges corresponding to the NYS Penal Law, VTL and other various local laws	Plain Text
LAW_CAT_CD	Level of offense: felony, misdemeanor, violation	Plain Text
ARREST_BORO	Borough of arrest. B(Bronx), S(Staten Island), K(Brooklyn), M(Manhattan), Q(Queens)	Plain Text
ARREST_PRECINCT	Precinct where the arrest occurred	Number
JURISDICTION_CODE	Jurisdiction responsible for arrest. Jurisdiction codes 0(Patrol), 1(Transit) and 2(Housing) represent NYPD whilst codes 3 and more represent non NYPD jurisdictions	Number
AGE_GROUP	Perpetrator's age within a category	Plain Text
PERP_SEX	Perpetrator's sex description	Plain Text
PERP_RACE	Perpetrator's race description	Plain Text
X_COORD_CD	Midblock X-coordinate for New York State Plane Coordinate System, Long Island Zone, NAD 83, units feet (FIPS 3104)	Number
Y_COORD_CD	Midblock Y-coordinate for New York State Plane Coordinate System, Long Island Zone, NAD 83, units feet (FIPS 3104)	Number
Latitude	Latitude coordinate for Global Coordinate System, WGS 1984, decimal degrees (EPSG 4326)	Number
Longitude	Longitude coordinate for Global Coordinate System, WGS 1984, decimal degrees (EPSG 4326)	Number

```
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 155507 entries, 0 to 155506
Data columns (total 19 columns):
#   Column                                Non-Null Count  Dtype
---  -
0   ARREST_KEY                            155507 non-null int64
1   ARREST_DATE                           155507 non-null object
2   PD_CD                                 155478 non-null float64
3   PD_DESC                               155404 non-null object
4   KY_CD                                 155404 non-null float64
5   OFNS_DESC                             155404 non-null object
6   LAW_CODE                              155507 non-null object
7   LAW_CAT_CD                            154114 non-null object
8   ARREST_BORO                           155507 non-null object
9   ARREST_PRECINCT                       155507 non-null int64
10  JURISDICTION_CODE                     155507 non-null int64
11  AGE_GROUP                             155507 non-null object
12  PERP_SEX                              155507 non-null object
13  PERP_RACE                             155507 non-null object
14  X_COORD_CD                            155507 non-null int64
15  Y_COORD_CD                            155507 non-null int64
16  Latitude                              155507 non-null float64
17  Longitude                             155507 non-null float64
18  New Georeferenced Column              155507 non-null object
dtypes: float64(4), int64(5), object(10)
memory usage: 22.5+ MB
```

Dataset

- 19 Columns
- RangeIndex: 155,507 to 155,506



NYC Data

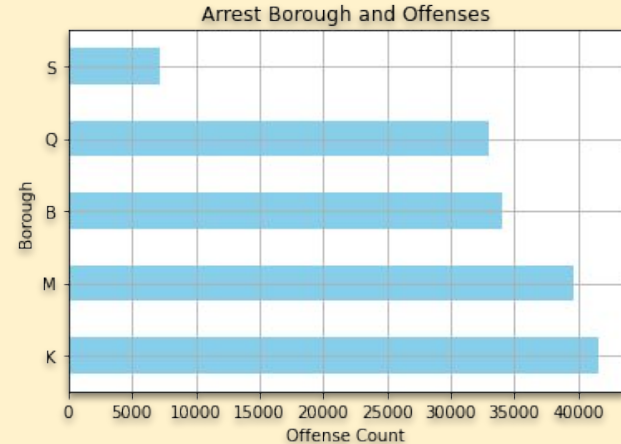
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[ 49... ASSAULT 3 & RELATED OFFENSES    26855  
        FELONY ASSAULT              15579  
        PETIT LARCENY               13178  
        DANGEROUS DRUGS             10450  
        MISCELLANEOUS PENAL LAW     10328  
        ...  
        PARKING OFFENSES            3  
        ADMINISTRATIVE CODES        2  
        FELONY SEX CRIMES           2  
        KIDNAPPING AND RELATED OFFENSES 1  
        NEW YORK CITY HEALTH CODE    1  
Name: OFNS_DESC, Length: 63, dtype: int64
```

Top Three Offenses in NYC:

Assault 3 & Related Offenses

Felony Assault

Dangerous Drugs



Borough With the Highest Offense:

Brooklyn - 41,524

Manhattan - 39,647

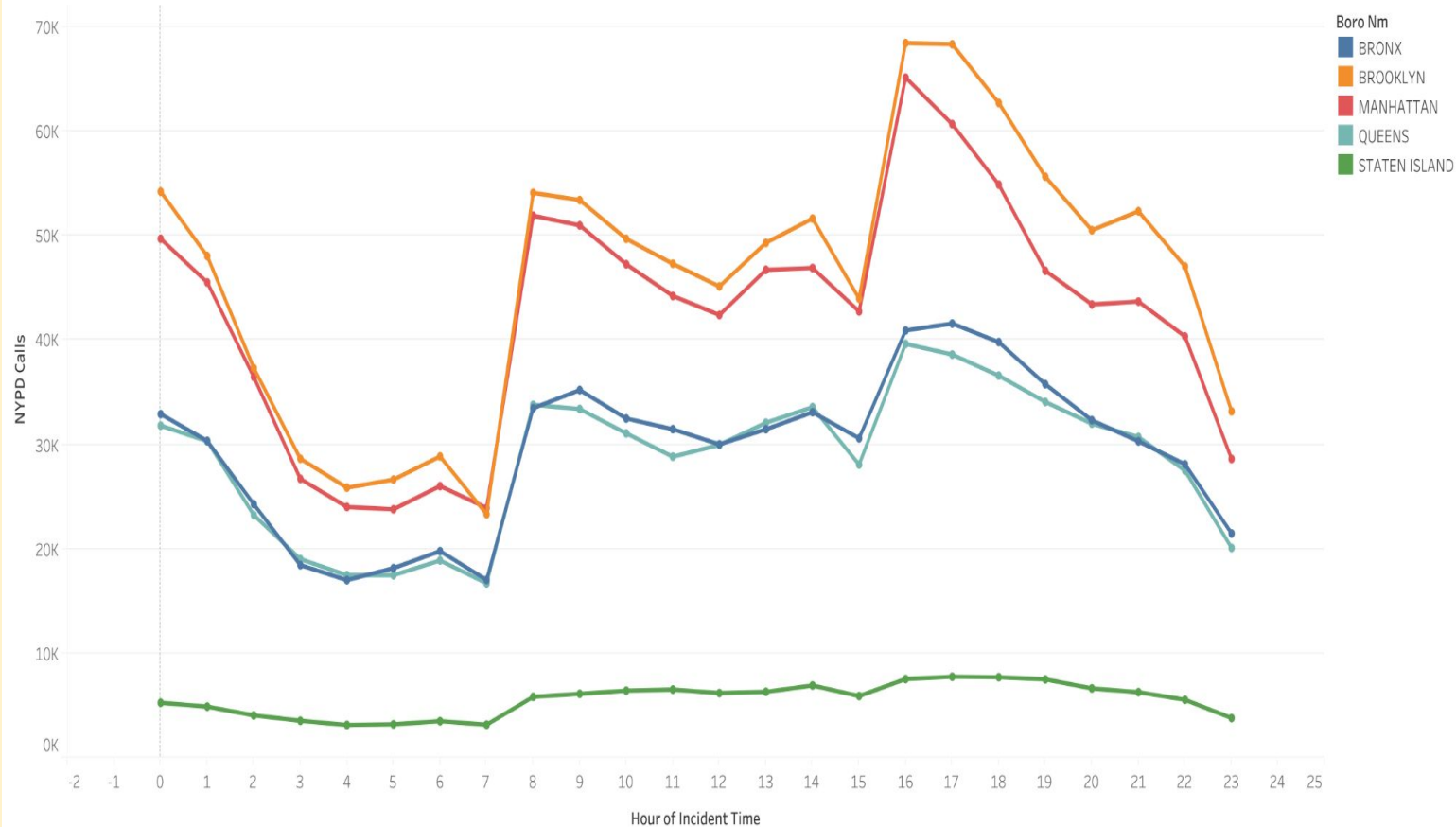
Bronx - 34,001

Queens - 33,023

Staten Island - 7,209



NYPD Calls Year to Date



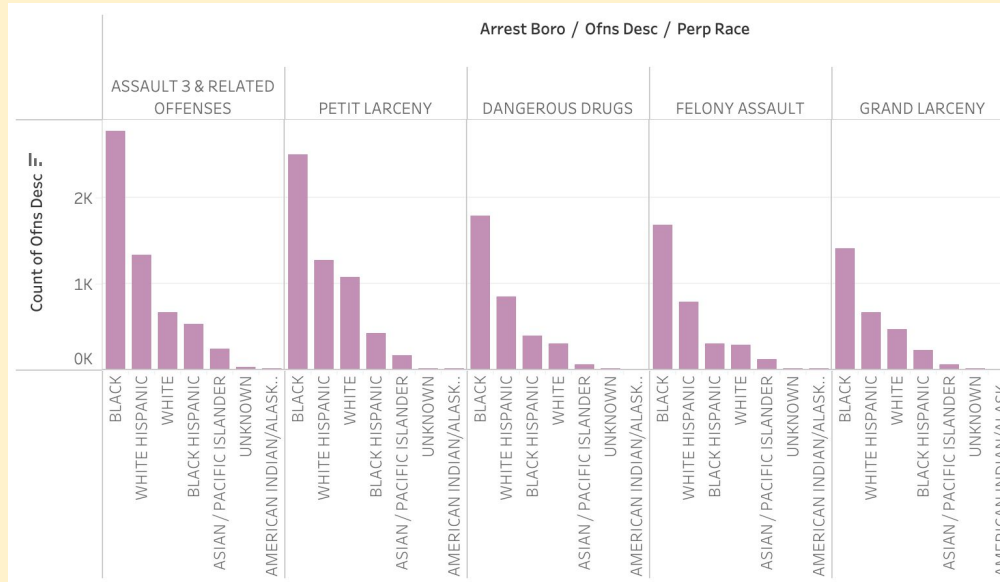
- Noticeable spikes at 12am, 8am, 2pm, and 9pm

- 4pm -> peak time for 911 calls

- Brooklyn is the borough with the most amount of 911 calls being made



Manhattan - Observation 1



Caption

Count of Ofns Desc for each Perp Race broken down by Arrest Boro and Ofns Desc. The view is filtered on Arrest Boro and Ofns Desc. The Arrest Boro filter keeps M. The Ofns Desc filter keeps ASSAULT 3 & RELATED OFFENSES, FELONY ASSAULT and PETIT LARCENY.

Source: NYPD Arrest Data (Year to Date)

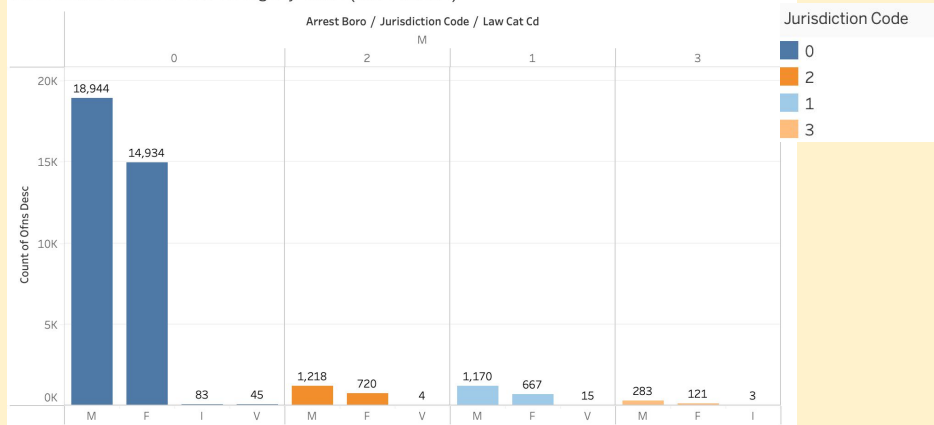
The Top 3 Offenses in Manhattan:

- Assault 3 and related offenses are committed more in Manhattan. Meanwhile, dangerous drugs are the third most committed crime
- The offenders that commit the top 3 crimes are Black, White Hispanics, and White (in order)
- The Dangerous Drug category is different from the top 2 crimes committed
 - Black, White Hispanics, and Black Hispanics commit the crime



Manhattan - Observation 2

Jurisdiction Code & Law Category Code (Manhattan)



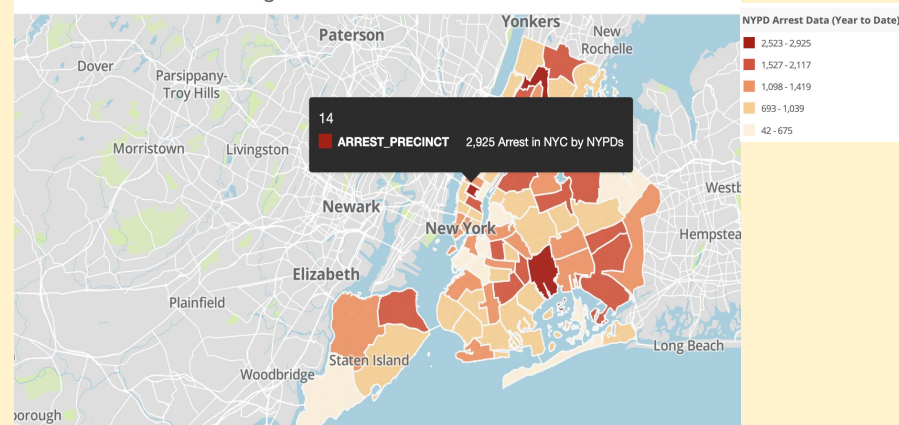
Caption

Count of Ofns Desc for each Law Cat Cd broken down by Arrest Boro and Jurisdiction Code. Color shows details about Jurisdiction Code. The view is filtered on Arrest Boro, Law Cat Cd and Jurisdiction Code. The Arrest Boro filter keeps M. The Law Cat Cd filter keeps F, I, M and V. The Jurisdiction Code filter keeps 0, 1, 2 and 3.

Top Jurisdiction Codes & Levels of Offense:

The Patrol Jurisdiction reported an overwhelming amount of misdemeanor and felony crime

Number of Arrest According to Precinct



Precinct Arrest Record:

The precinct on 35th Street has the most arrest reports



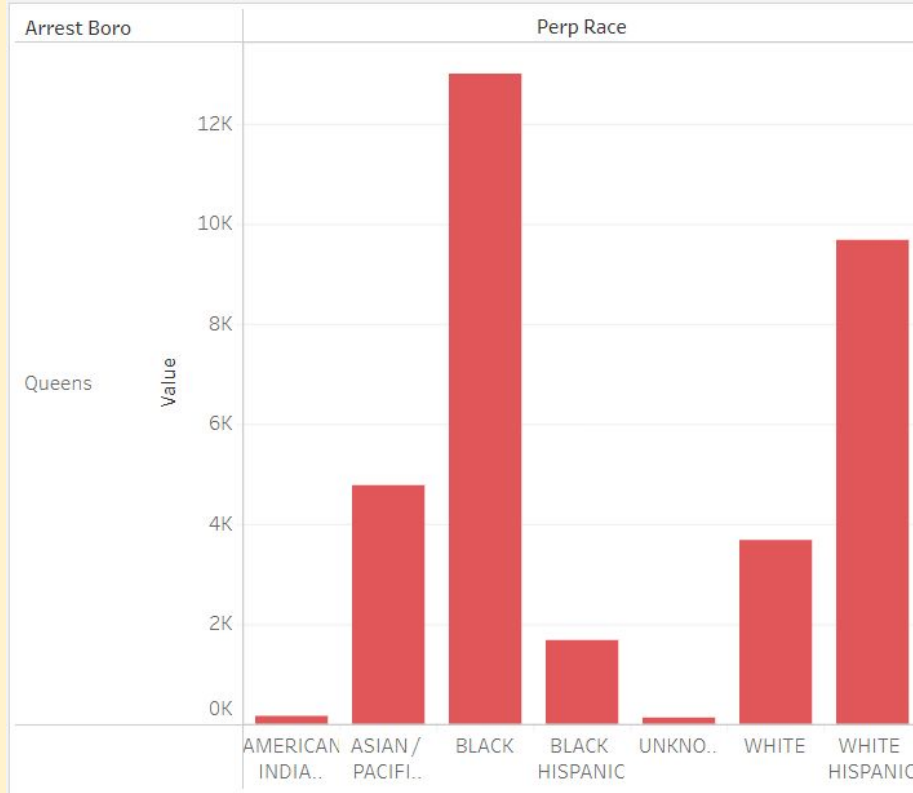
Manhattan - Key Insights



- Assault in 3rd degree is the top crime committed in Manhattan, specifically downtown Manhattan
- The housing and transit jurisdiction are 2nd and 3rd in ranking, respectively, with arrest reports
- The majority of the crimes committed are misdemeanors



Queens - Observation 1

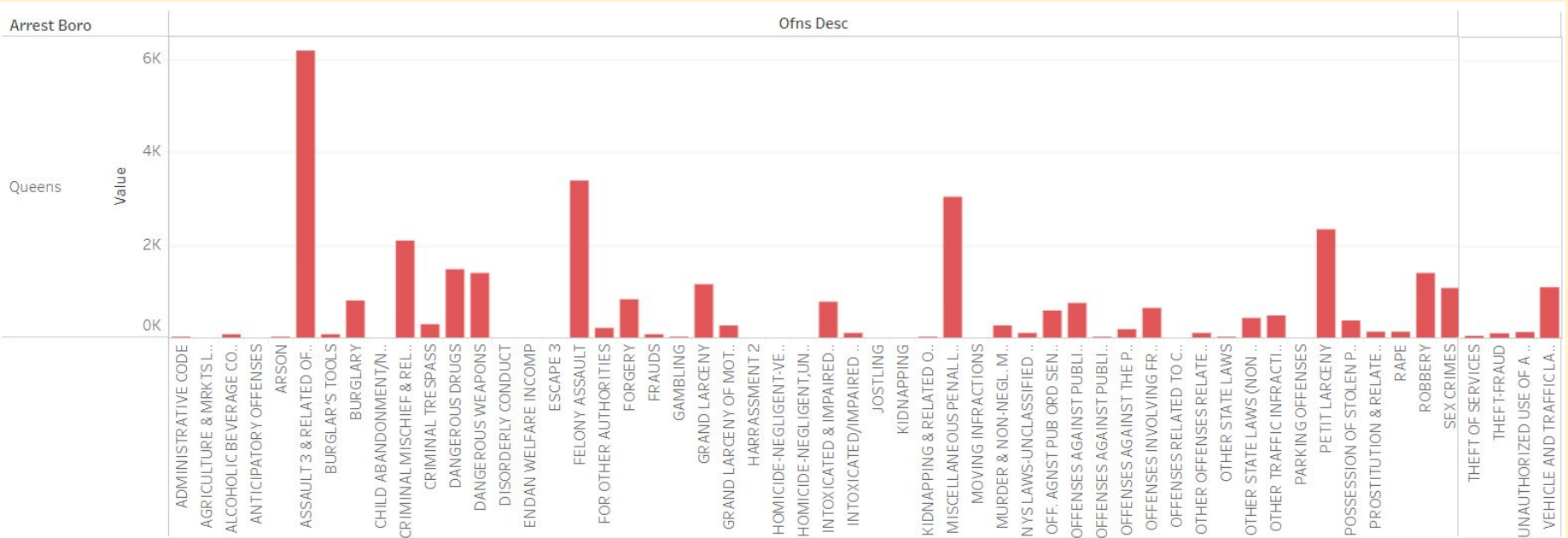


Top 3 races committing crimes

1. Black 12,981
2. White Hispanic 9,680
3. Asian/Pacific Islander 4,761



Queens - Observation 2



Top 3 crimes committed

1. Assault 3 & Related Offenses 6,207
2. Felony Assault 3,393
3. Miscellaneous Penal Law 3,044



Queens - Key Insights



- Assault crimes seem to be the most common type of crime
- Queens is a very diverse borough with many different races living in it
- Different cultures and ethnicities are also present in this borough



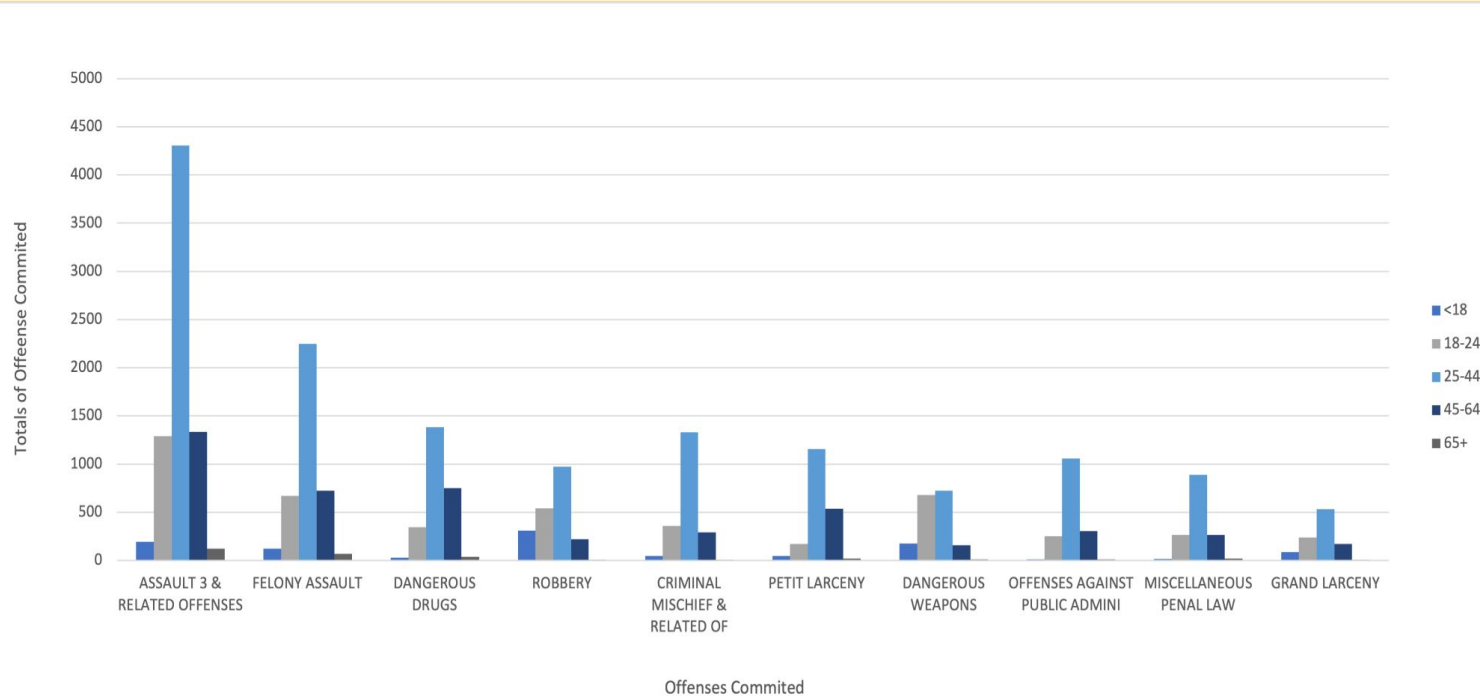
Bronx - Observation 1

Top 3 Offenses Committed:

1. Assault 3 & Related Offenses - 7249

2. Felony Assault - 3834

3. Dangerous Drugs - 2546



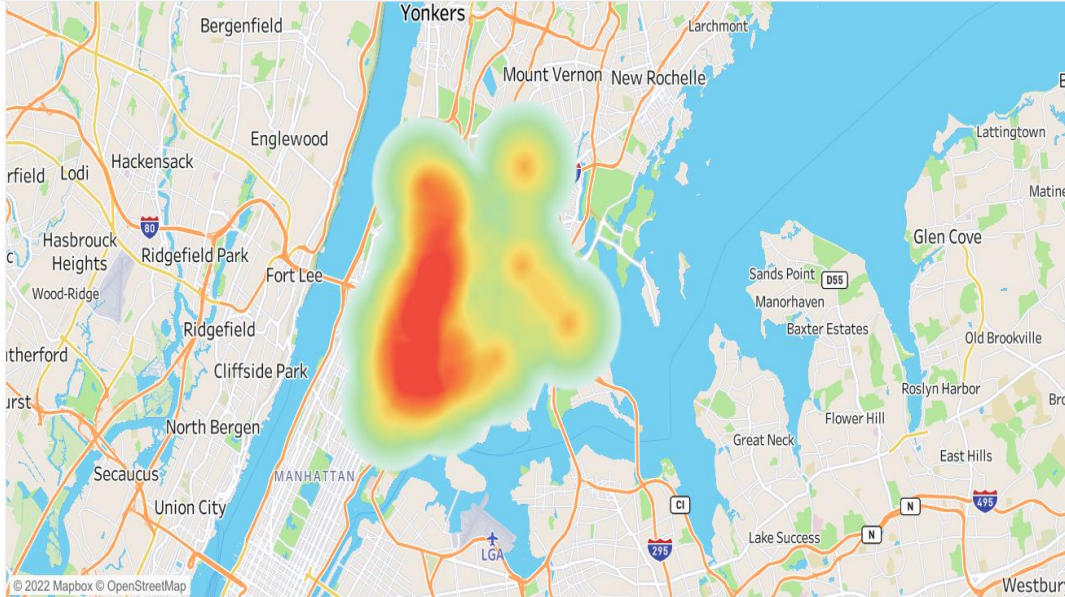
- Ages 25-44 are arrested the most out of all age groups



Bronx - Observation 2

Crime Rate Hotspots (Bronx)

Arrest Boro



- 12 precincts available in the Bronx
- Heatmap show the west side of the Bronx makes the most arrests → higher crime rate
- Crimes are relatively low on the East and the outskirts of the Bronx



Bronx - Key Insights

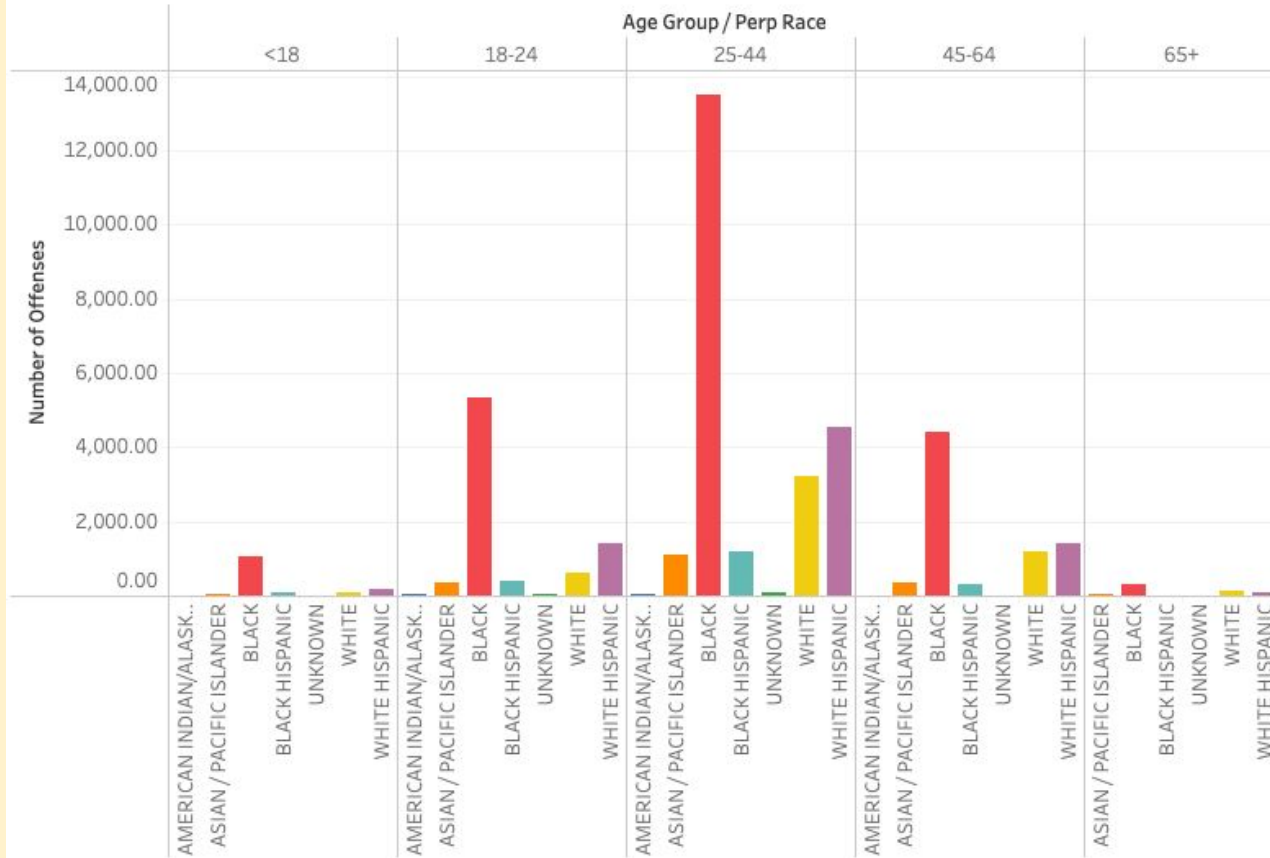


- Despite having the highest crime rate per capita (6.81 per 1,000 residents) there are fewer precincts available in the Bronx than in Brooklyn, Manhattan, and Queens
- Highbridge, Hunts Point, and Crotona are neighborhoods located on the west side of the Bronx where cases like drug crimes and street gang activities are running rampant
- Not enough safe outdoor spaces in low-income neighborhoods for the youth → witness more adversity such as violence and illegal activities



Brooklyn - Observation 1

Brooklyn Crime by Age & Race



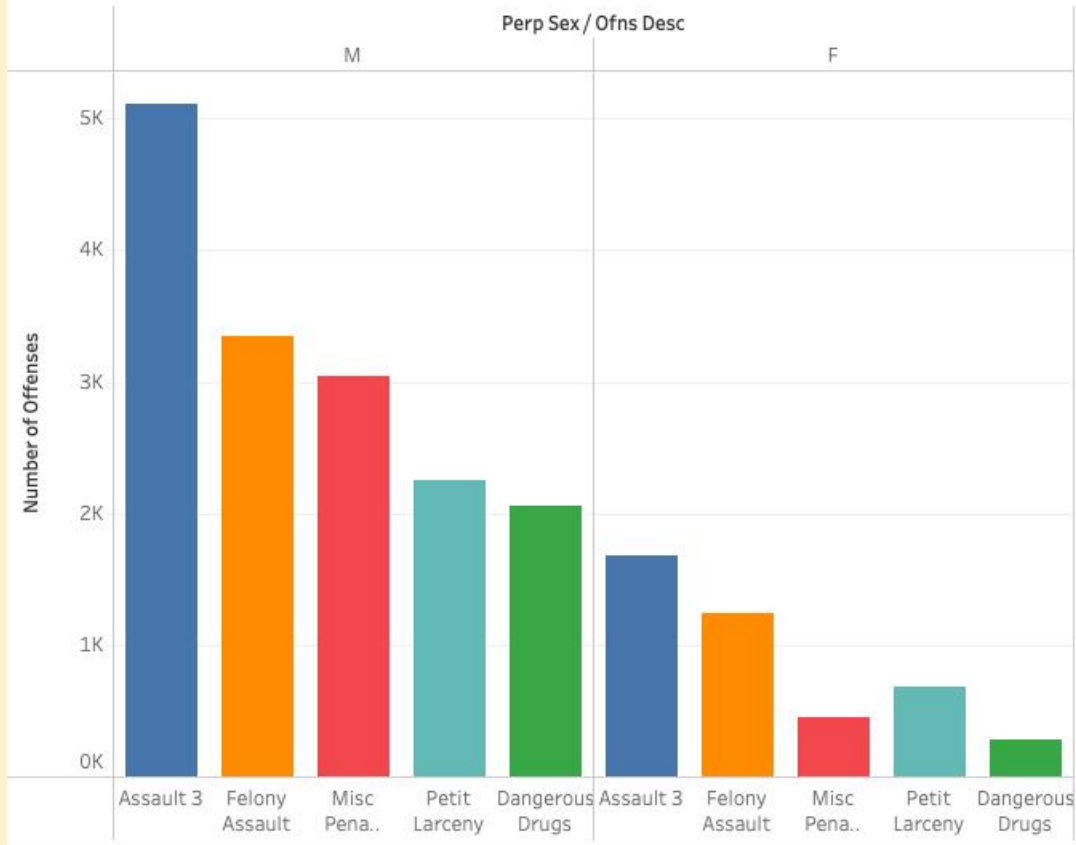
Most offenses committed in Brooklyn are by black people that are 25-44 years old

In every age group, black people have the most offenses



Brooklyn - Observation 2

Brooklyn Crime by Crime & Gender



Most offenses committed in Brooklyn are by men, while the most common crime committed by both men and women are assaults



Brooklyn Key Insights

In Brooklyn, majority of offenses are committed by black men that are 25-44 years old. The most common crime in Brooklyn is Assault 3

As of 2020, black people in Brooklyn..

- made up 31.31% of the population in Brooklyn
- participated in the labor force at 60.4%

Black

High School Graduation Rate: 85.66%

Bachelors Rate: 25.18%



Conclusion & Recommendation



Brooklyn Recommendations

According to data, black people have the largest amount of offenses committed in every age group with most being 18-64 years. This age range is also defined as the working age population

From research, only 60.4% of working-age black people participate in the labor force, which leaves room to ask what is the rest of the 39.6% of working-age black people doing?

The goal is to get more people into the workforce and off of the streets. However, only 25.18% of black people have their bachelor's

We recommend that there should be more access to education programs to help black people get through college and earn their bachelor's

There should also be more job training programs and initiatives in Brooklyn to lessen the employment gap and increase the labor force participation rate



Brooklyn Recommendations

According to data, men have the most offenses committed in Brooklyn. The most common crime in Brooklyn is Assault 3 and then Felony Assault

From research, assault happens when there is an intent to cause physical injury to another person or that it was done recklessly

The goal is to lessen the amount of people committing assaults

We recommend that there should be more access to mental health services and programs that are low-cost/free and targeted to men

This will help provide men with more coping strategies and tools to turn to when they have an urge to commit an assault. It can also help them unpack the root of their action and help them make better ones in the future

Mental Health
MATTERS



Conclusion & Recommendation

- Officers should take classes and training for cultural and racial awareness
- Invest in prevention and intervention programs to assist communities in the four boroughs
- Safety precautions and access to emergency agencies in train stations
- Reinforce extra patrol officers during peak hours when crimes are committed and for high-crime hotspot areas
- Use fundings to rebuild infrastructures around neighborhoods to ensure the safety of communities (building streetlights, having cleaner streets, rail transits for transportation..)



Q&A



Resources

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