



Crime rate analysis in New York in 2021

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AGENDA

Overview of Arrests

Breakdown of Race within the Arrests

Age & Sex of the Arrests

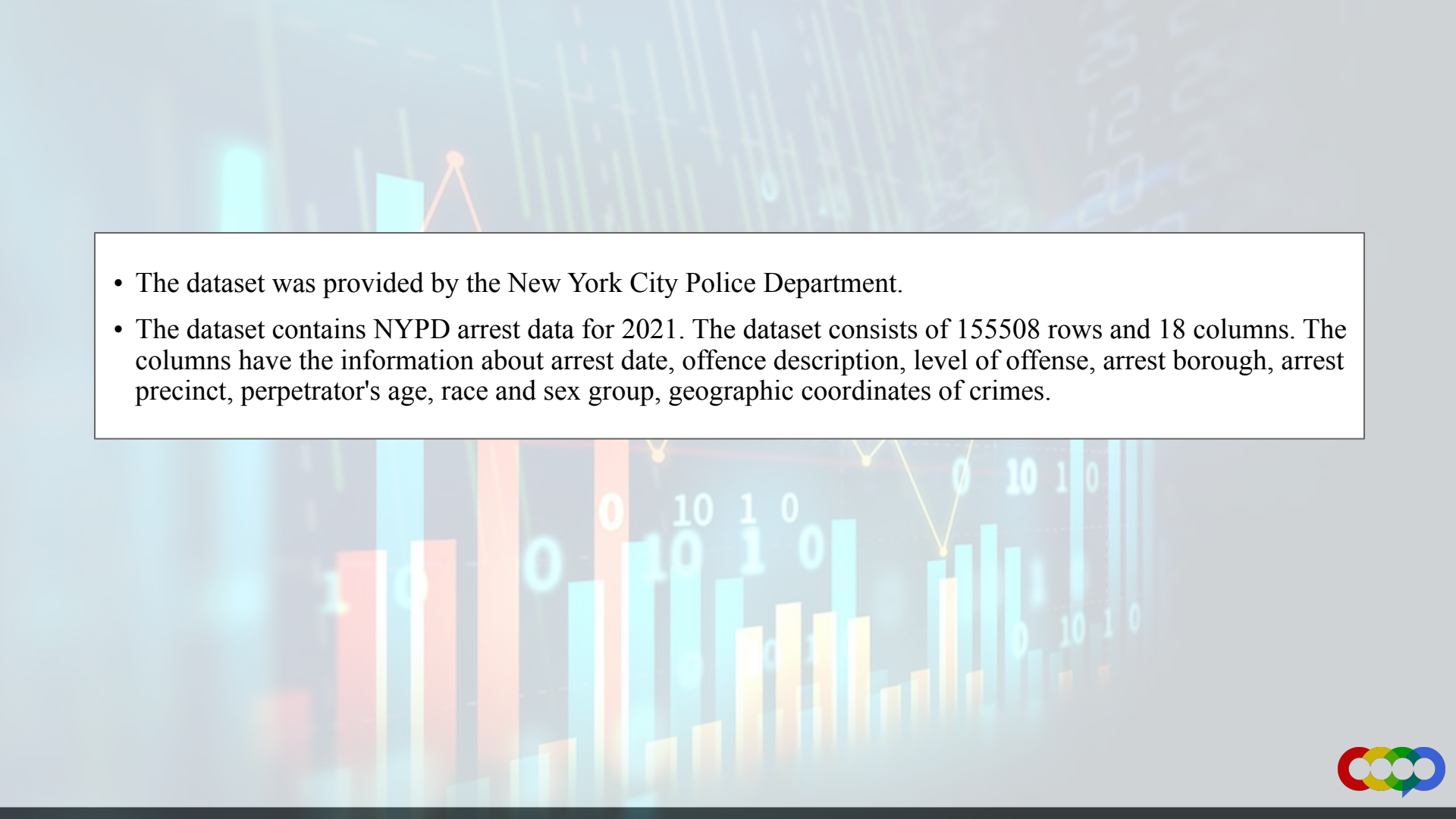
Conclusion & Recommendations for our client

Q&A



Our client is Police
Commissioner of New
York Keechant L. Sewell
who wants us to help
improve the work of the
NYC police department.



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- The background of the slide features a stylized, semi-transparent graphic of a bar chart and a line graph. The bar chart has bars in shades of blue, red, and yellow. The line graph has a yellow line with circular markers. Faint binary code (0s and 1s) is scattered across the background.
- The dataset was provided by the New York City Police Department.
 - The dataset contains NYPD arrest data for 2021. The dataset consists of 155508 rows and 18 columns. The columns have the information about arrest date, offence description, level of offense, arrest borough, arrest precinct, perpetrator's age, race and sex group, geographic coordinates of crimes.





The goal of our work is:

- To check what are the most frequent crimes in 2021, find the locations of where they usually happen and establish the possible reasons.
- To check the statistics for the perpetrators' race, age and gender.
- To check the arrests' statistics per precinct and borough.
- Compare and analyze the results.
- Make recommendations on how to improve the work of NYPD based on the data.

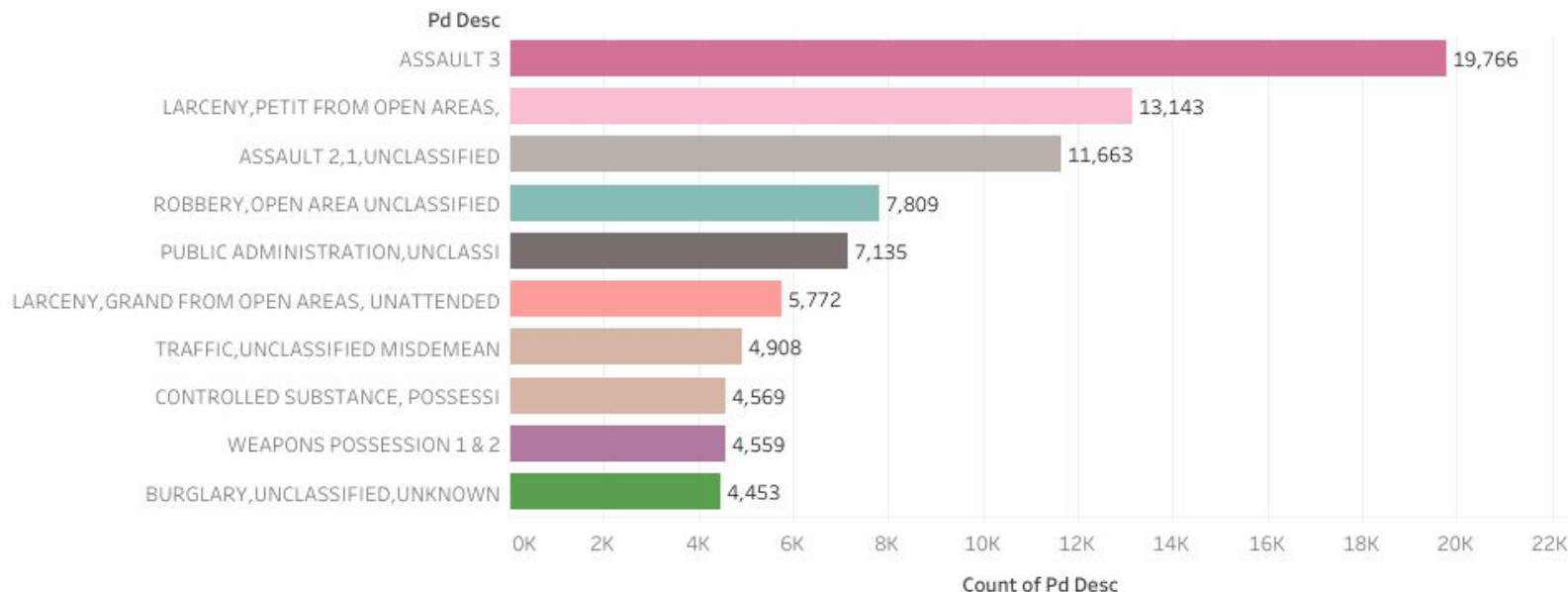


An Overview of Crime in New York City



We will find out what were the most frequent crimes in NYC in 2021. These are the top ten:

<Top ten crimes in NYC in 2021>

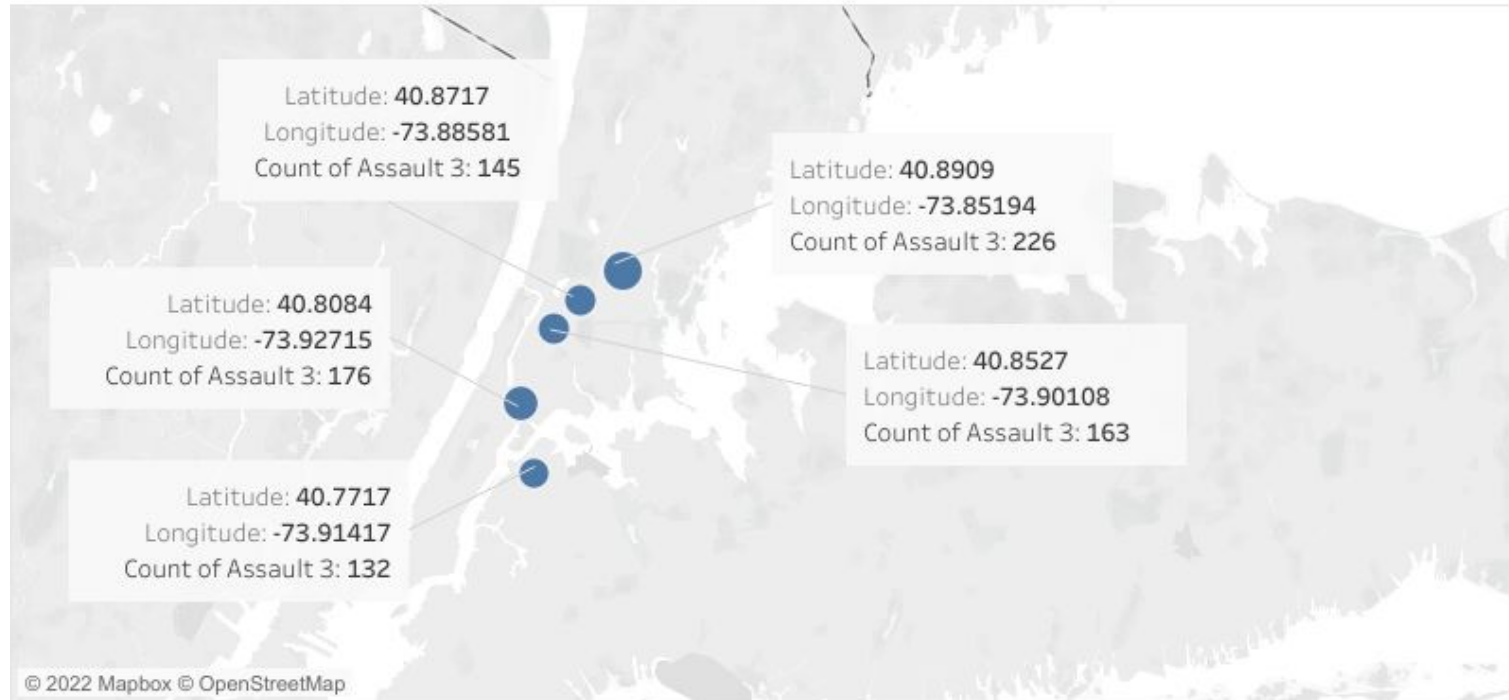


- ❖ Observations: As we can see, the three most frequent crimes are third-degree assault, larceny in open areas and assault in the first and second degree.



Now let's look at the locations where the most frequent crimes usually happen. These are the top five locations for assaults in the third degree.

<The locations with the highest number of assaults in the third degree>



Let's take a closer look at these locations. The locations with the highest number of assaults in the third degree:

1 – Laconia Ave. Between E 229th and E 230th in the Bronx

2 – Alexander Ave. Between E138th and E139th in Manhattan

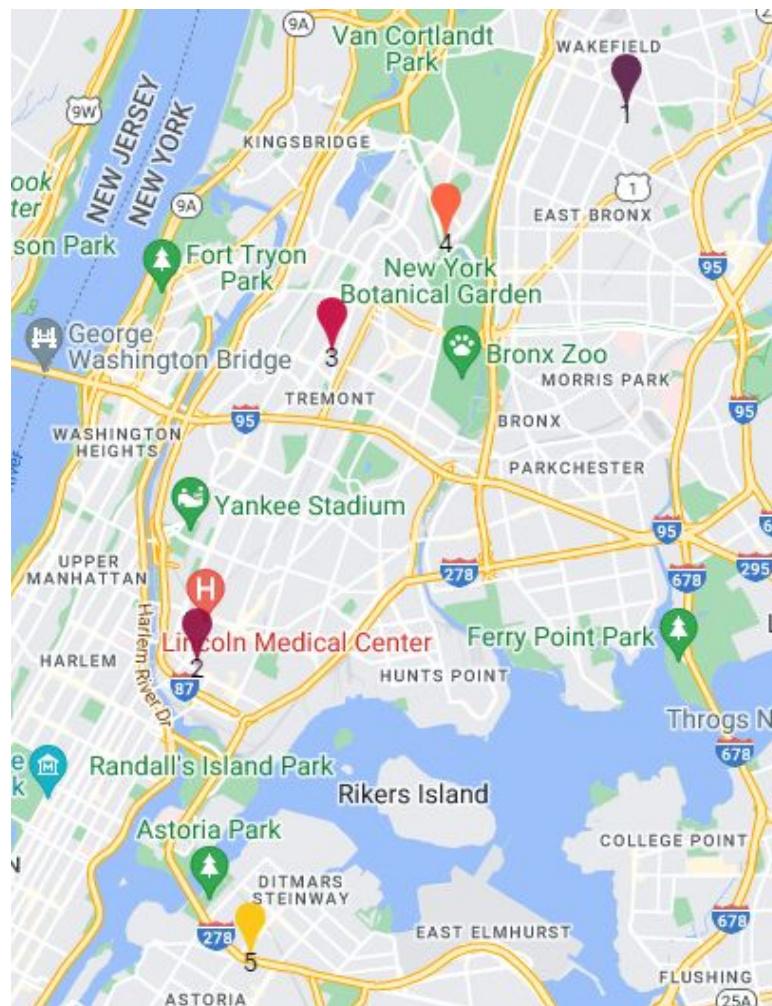
3 – Ryer Ave. Between E 180th and E 181th in the Bronx

4 – Webster Ave. Between Mosholu Pkwy and E Mosholu Pkwy N in the Bronx

5 – Astoria Blvd S. Between 34th and 35th st in Queens.

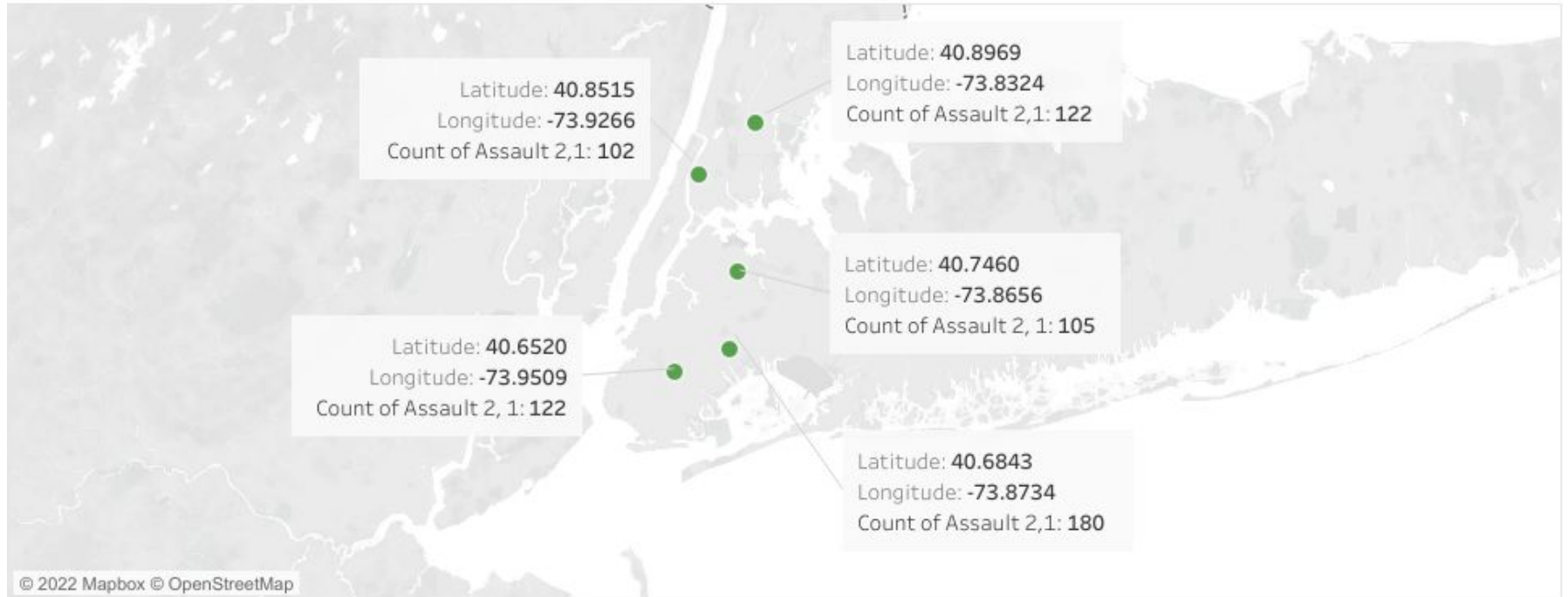
Observations:

- ❖ These locations are mostly in the Bronx, one in Upper Manhattan and one in Queens.



The third most frequent crime is an assault in the second and first degree. These are the top five locations where they happen.

<The locations with the highest number of assaults in the second and first degree>

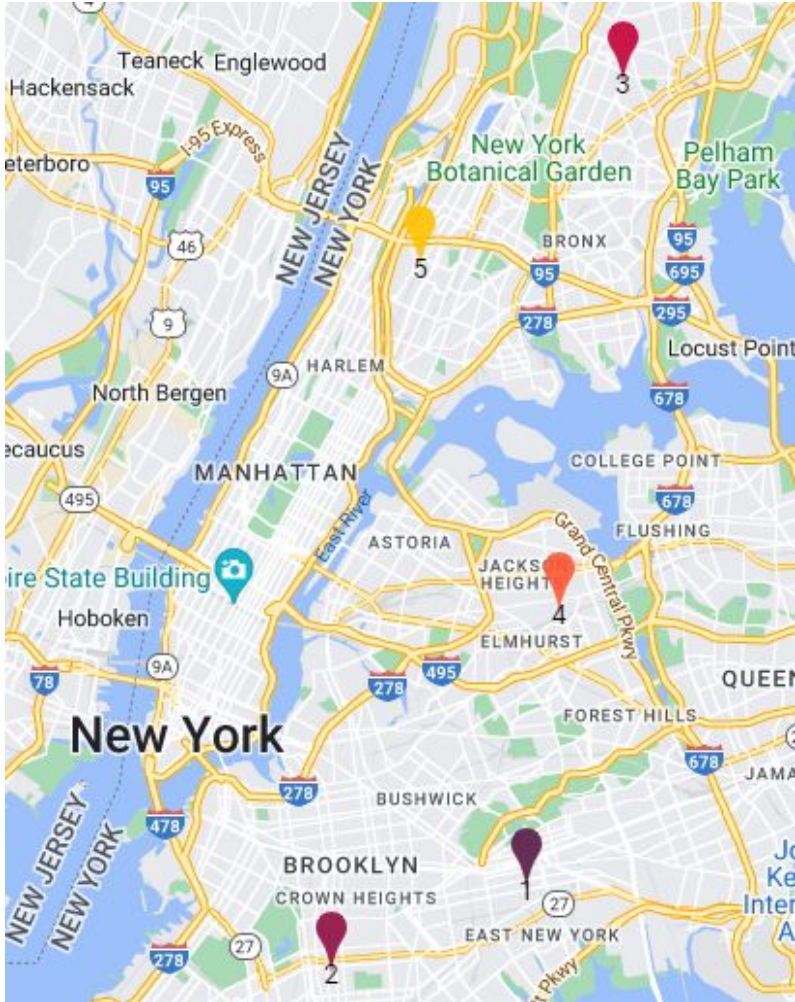


Let's take a closer look at these locations. The locations with the highest number of assaults in the second and first degree:

- 1 – Sutter Ave. Between Essex St and Elton St in Brooklyn
- 2 – Snyder Ave. Between Rogers Ave and Nostrand Ave in Brooklyn
- 3 – Laconia Ave. Between 229th and 230th St in the Bronx
- 4 – 43rd Ave. Between 94th and 95th streets in Queens
- 5 – at the crossing of Jerome Ave and Gerard Ave in the Bronx.

Observations:

- ❖ Two of these locations are in the Bronx, two more are in Brooklyn and one location is in Jackson Heights in Queens. Locations two and three have the same number of assaults, so they are interchangeable.



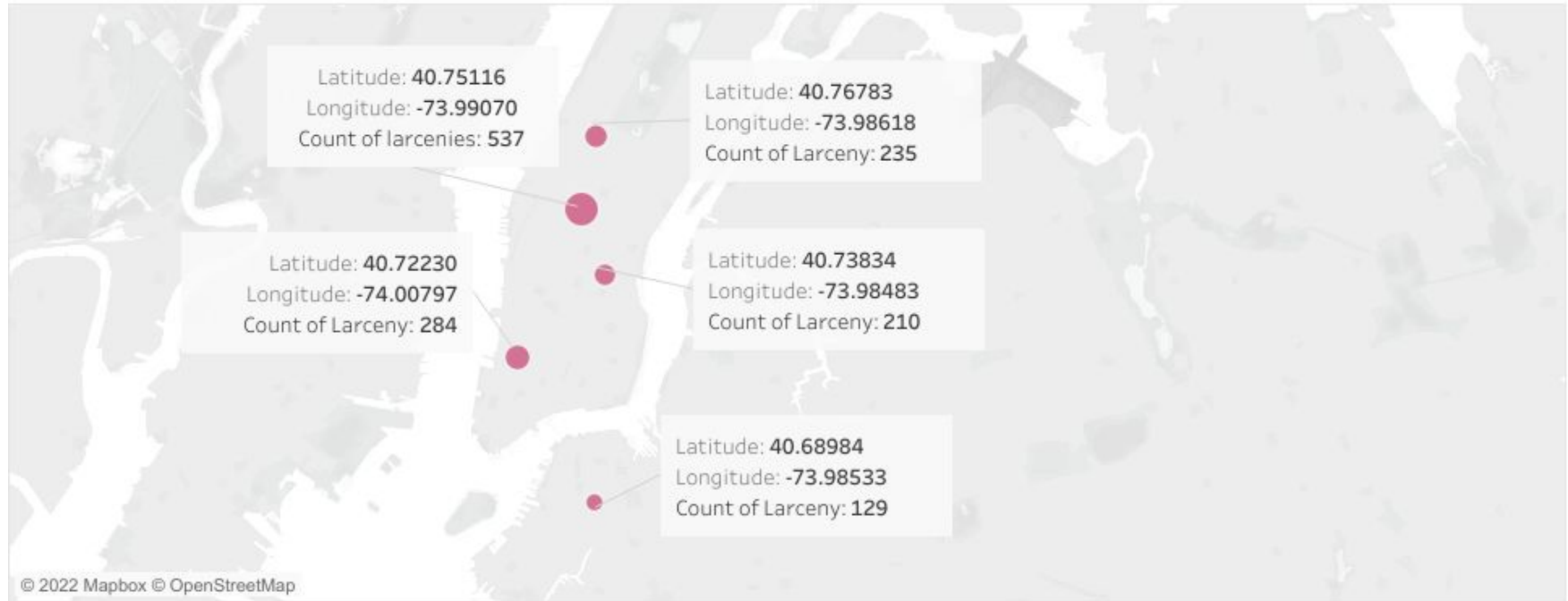
Insights:

- The population of these neighborhoods is mostly people of color (African Americans and Hispanics). The exception is Woodside, where about 40 % of inhabitants are Asians.
- The majority of families are low income. There are two exceptions: Flatbush (where there is a mix of low income and middle class families) and Woodside (which is a predominantly middle class neighborhood). Because of the low income, these neighborhoods' rate of violent crimes per capita is greater than that of the city as a whole.
- Some of these neighborhoods, especially Wakefield, have seen a rise in gangs and gang-related violence. City Line and Concourse are well-known with their high crime rates. Flatbush is safe overall, but there are still parts of it that are dangerous.
- The high school dropout rate is higher than the city average.
- The location on Astoria Blvd is in Long Island City in Queens and has a lot of bars and restaurants in the area, which makes it more crowded and appealing for people. This way, this crowded area with many people under the alcohol influence creates favorable conditions for committing crimes.
- In Woodside the rate of violent crimes per capita is less than that of the city as a whole. It is hard to tell what could be the reason of the high number of assaults in the second and first degree in this neighborhood.



The second most frequent crime is larceny in open areas. These are the top five locations where they happen.

<The locations with the highest number of larcenies from open areas>



Let's take a closer look at these locations. The locations with the highest number of larcenies in open areas:

- 1 – W 34th St. Between 6th and 7th Ave. in Manhattan.
- 2 – Ericsson Pl. Between Hudson St and Varick st in Manhattan.
- 3 – W54th St. Between 8th and 9th Ave. in Manhattan.
- 4 – E 21st St. Between 2nd and 3rd Ave. in Manhattan.
- 5 – Fulton St. Between Bridge St and Lawrence St. in Brooklyn.

Observations:

- ❖ Four of the locations are in Manhattan and one



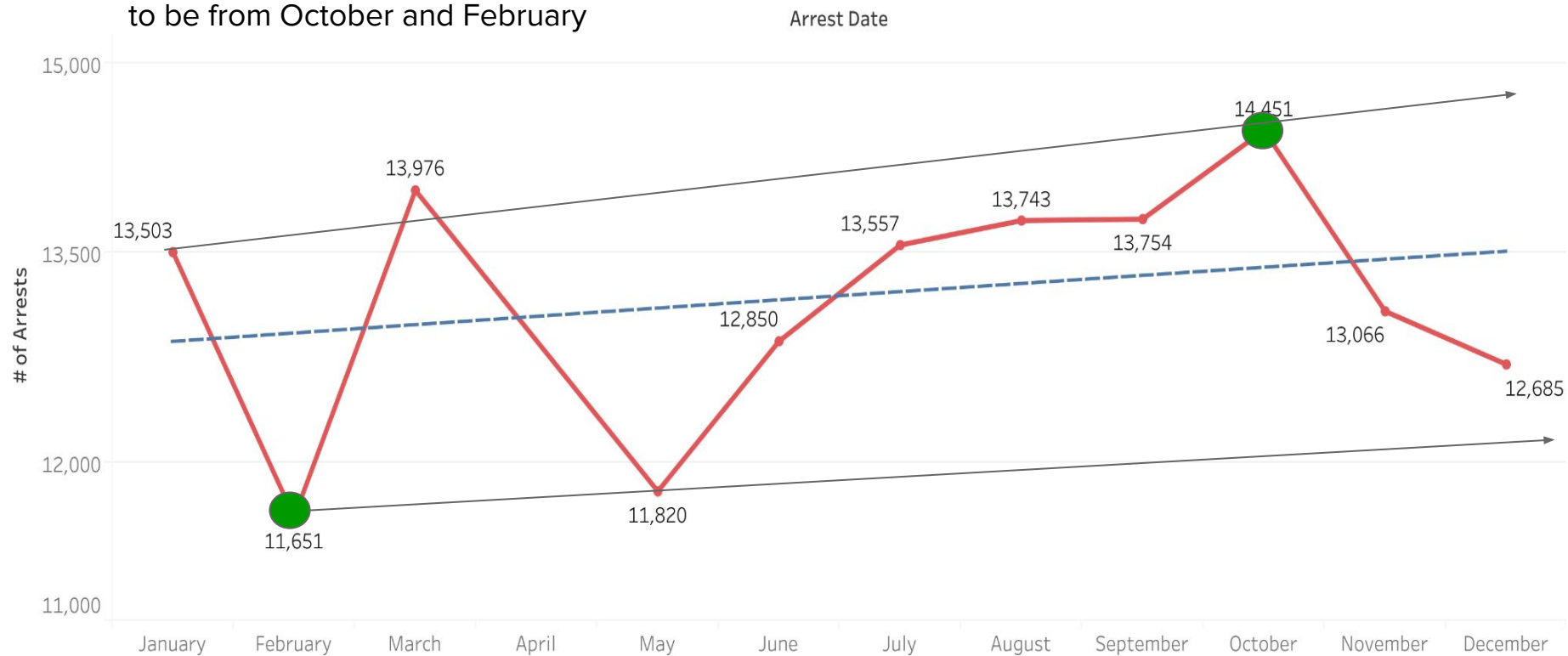
Insights:

- All these locations are near popular tourist attractions. It is always crowded there. Tourists usually have a lot of valuables with them like cameras, credit cards and cash. They also do not pay much attention to what is going on around them, because they take pictures and look at buildings and signs. For these reasons, they become easy targets for larcenies.

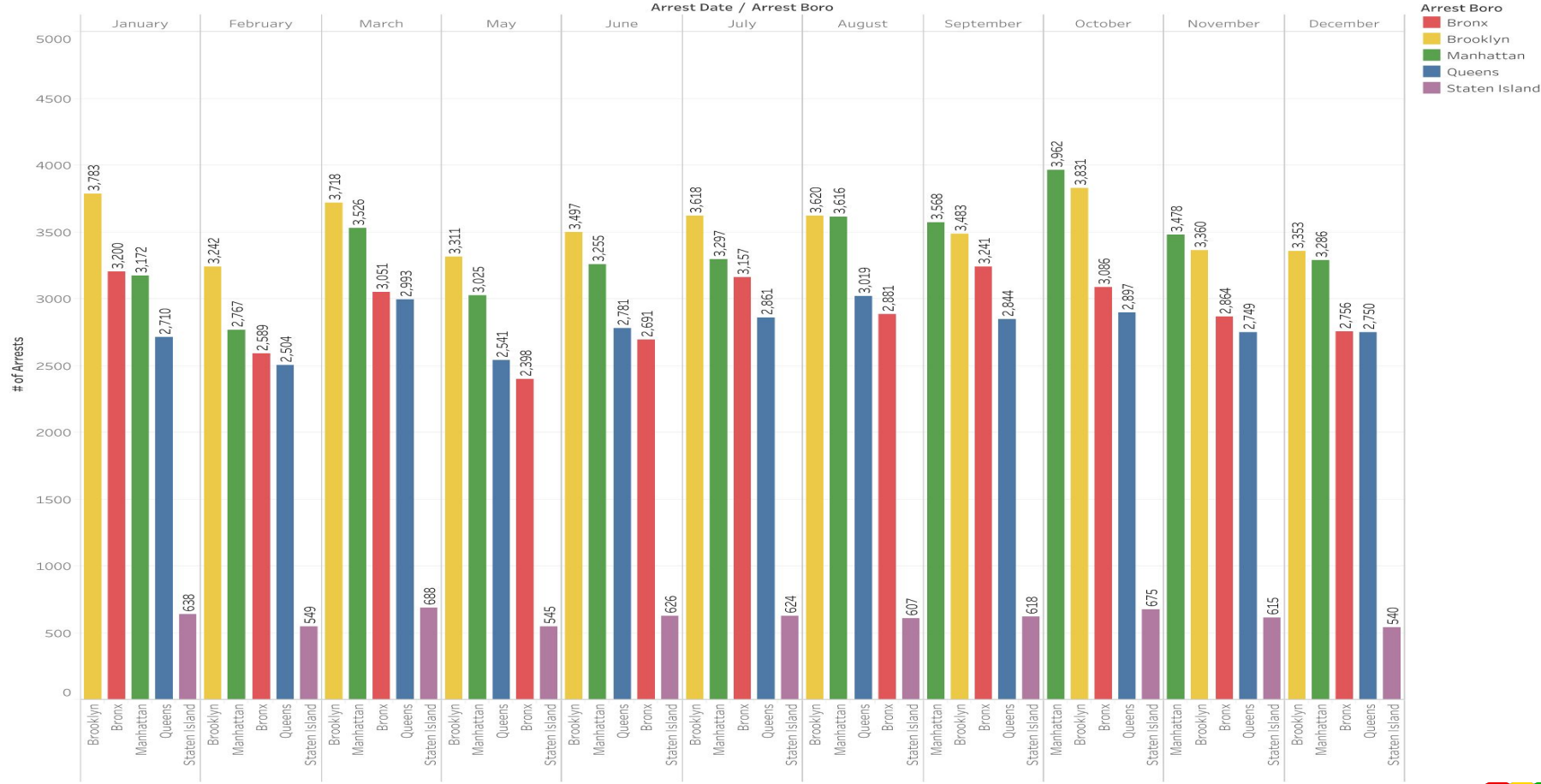


❖ We have the max and min arrests to be from October and February

Arrests Per Month

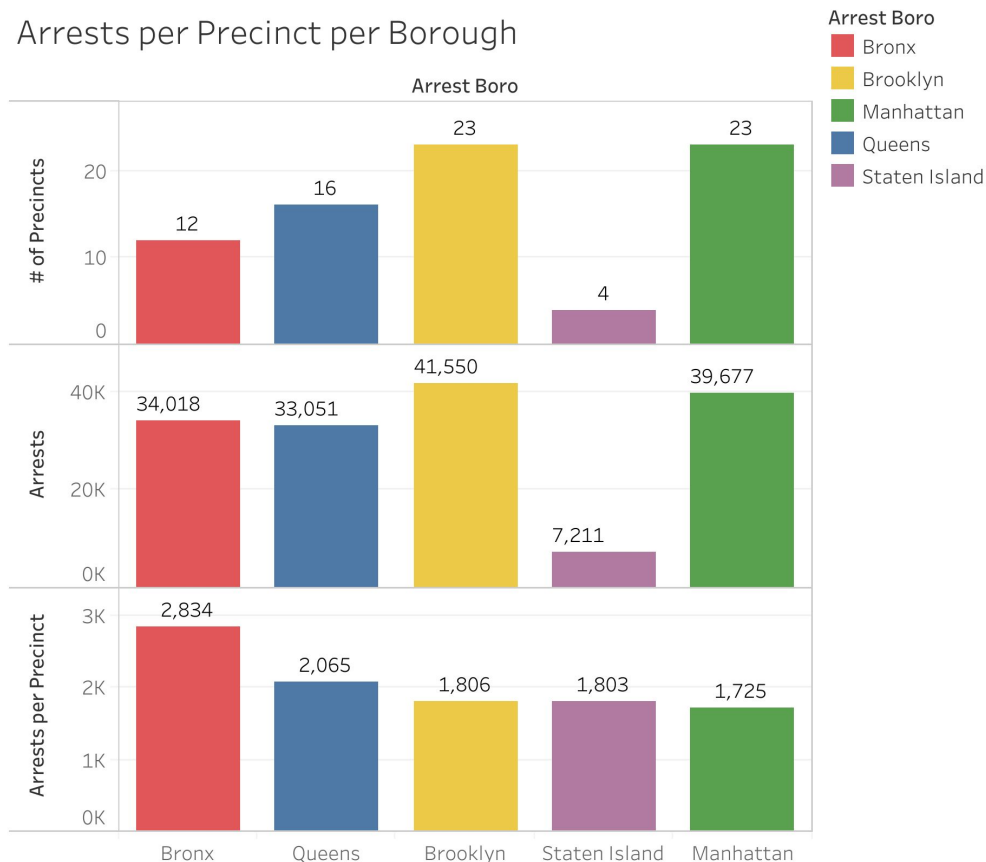


Arrests Per Month



❖ Manhattan and Brooklyn have the most Precincts and Arrests

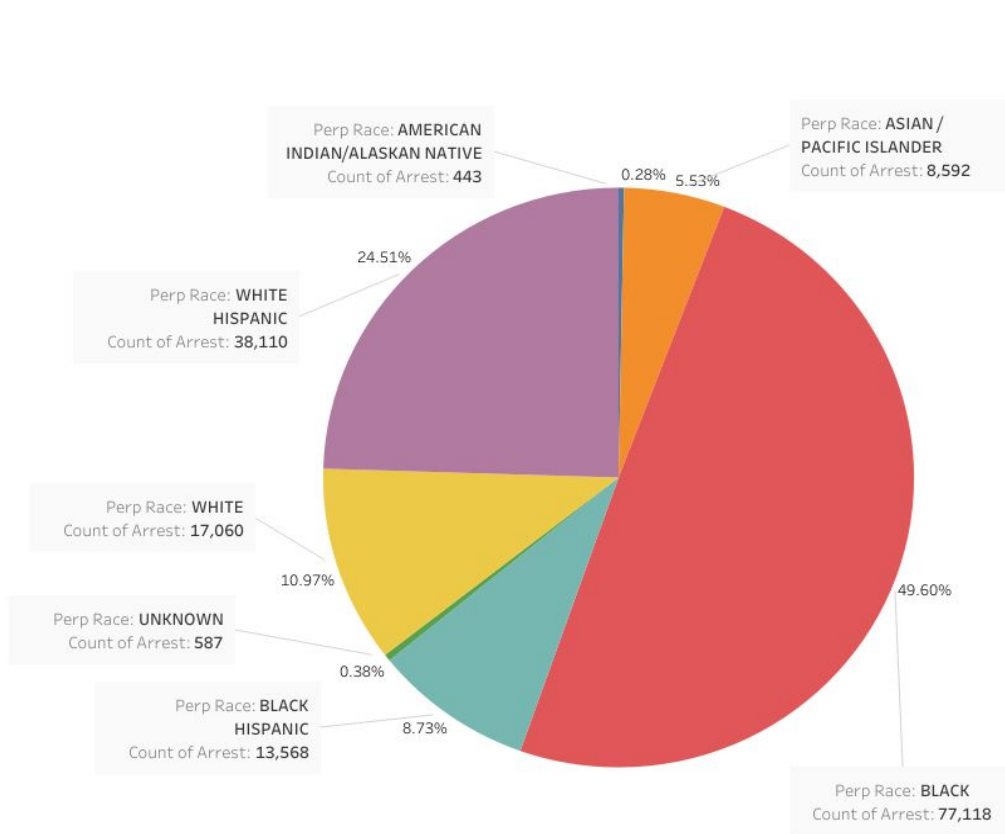
Arrests per Precinct per Borough



Race of Arrests



Race PieChart



Count of Arrest

155,478

Perp Race

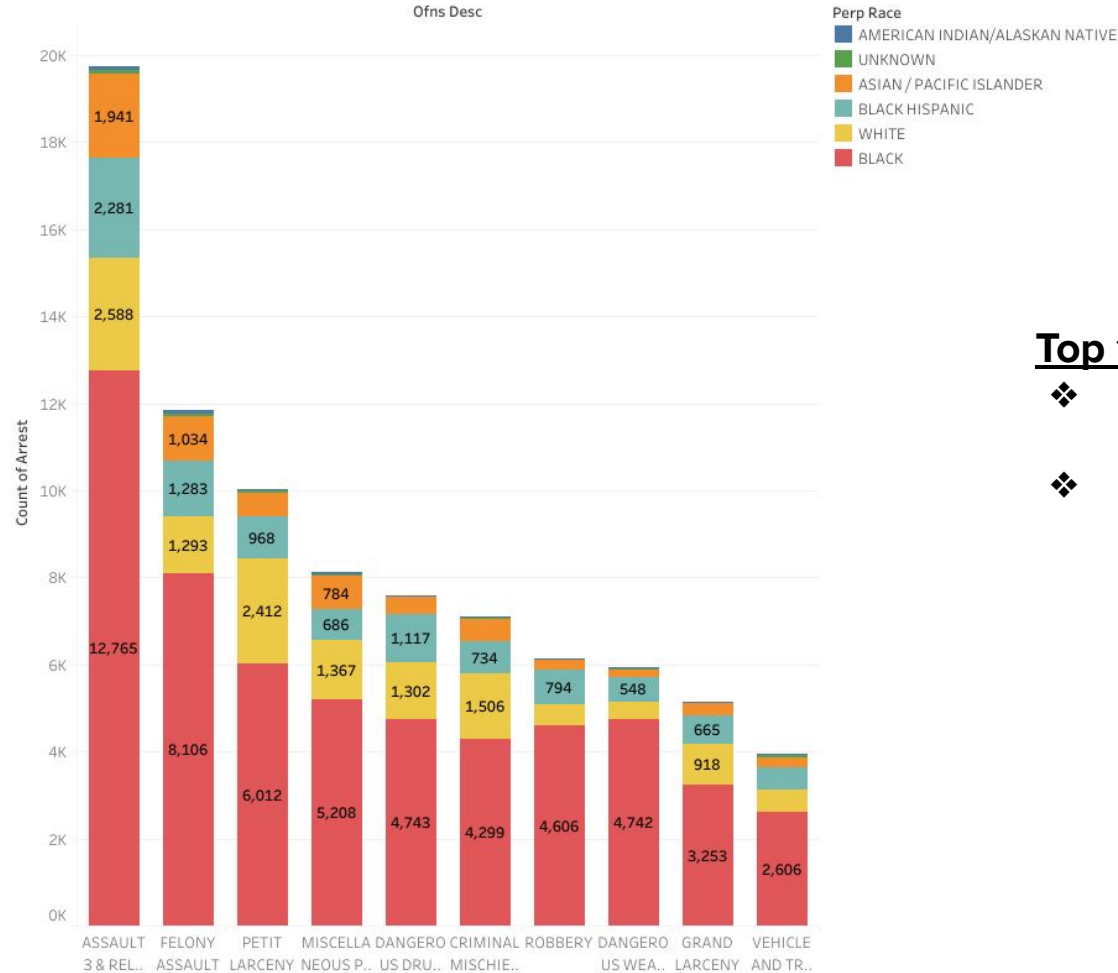
- AMERICAN INDIAN/ALASKAN NATIVE
- ASIAN / PACIFIC ISLANDER
- BLACK
- BLACK HISPANIC
- UNKNOWN
- WHITE
- WHITE HISPANIC

Observations:

- ❖ People of color is almost 50% of the total arrest.



Top 10 Crimes Sorted by Race

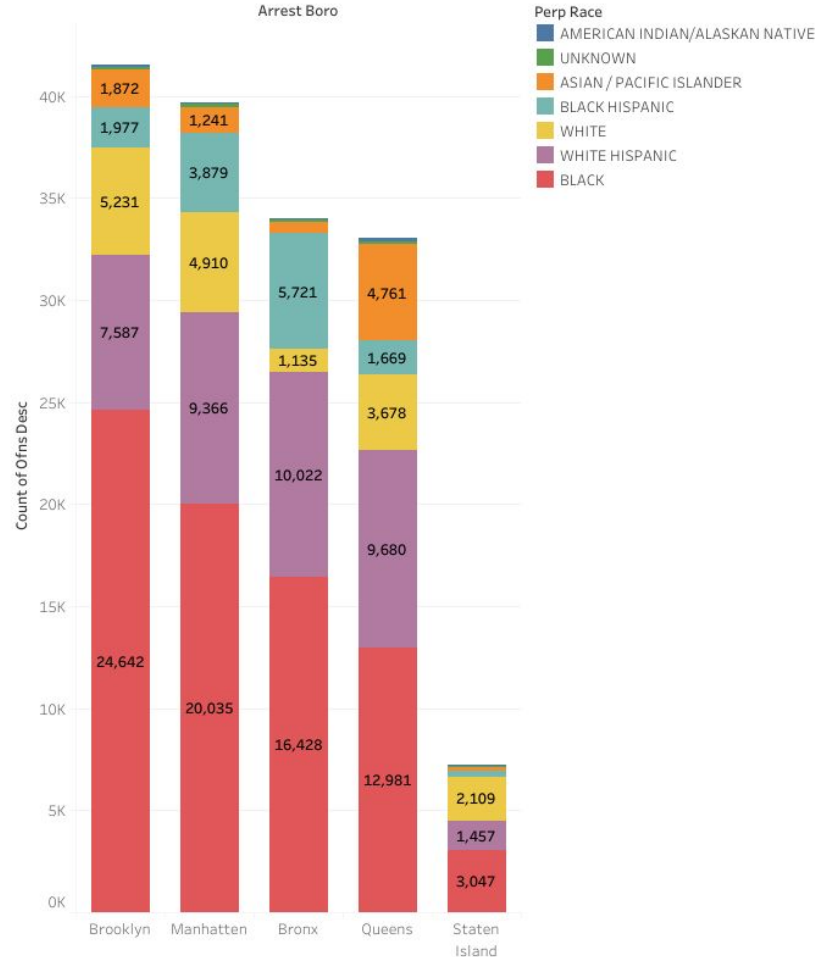


Top 10 Crimes further filtered by Race

- ❖ Assault in the 3rd degree is the most common offence.
- ❖ Most of the top 10 offences had more black people arrested than the other race combined together.



Race Sorted in Borough

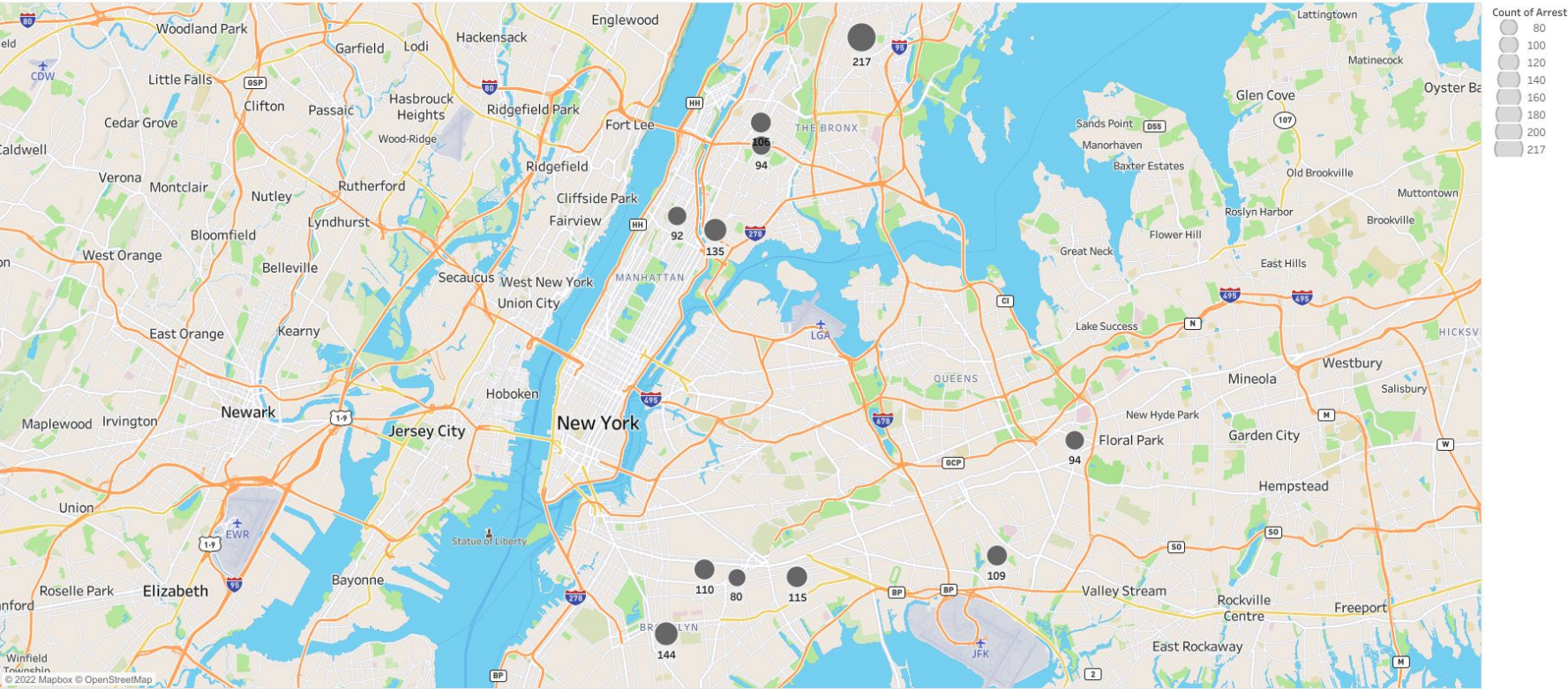


Overall Total of Arrest for Each Borough

- ❖ Brooklyn Total: 41550
 - 59.3% is people of color
- ❖ Manhattan Total: 39677
 - 50.5% people of color
- ❖ Bronx Total: 34018
 - 48.3% people of color
- ❖ Queens Total: 33501
 - 38.7% people of color
- ❖ Staten Island Total: 7211
 - 42.3% people of color



Map of Arrest for People of Color



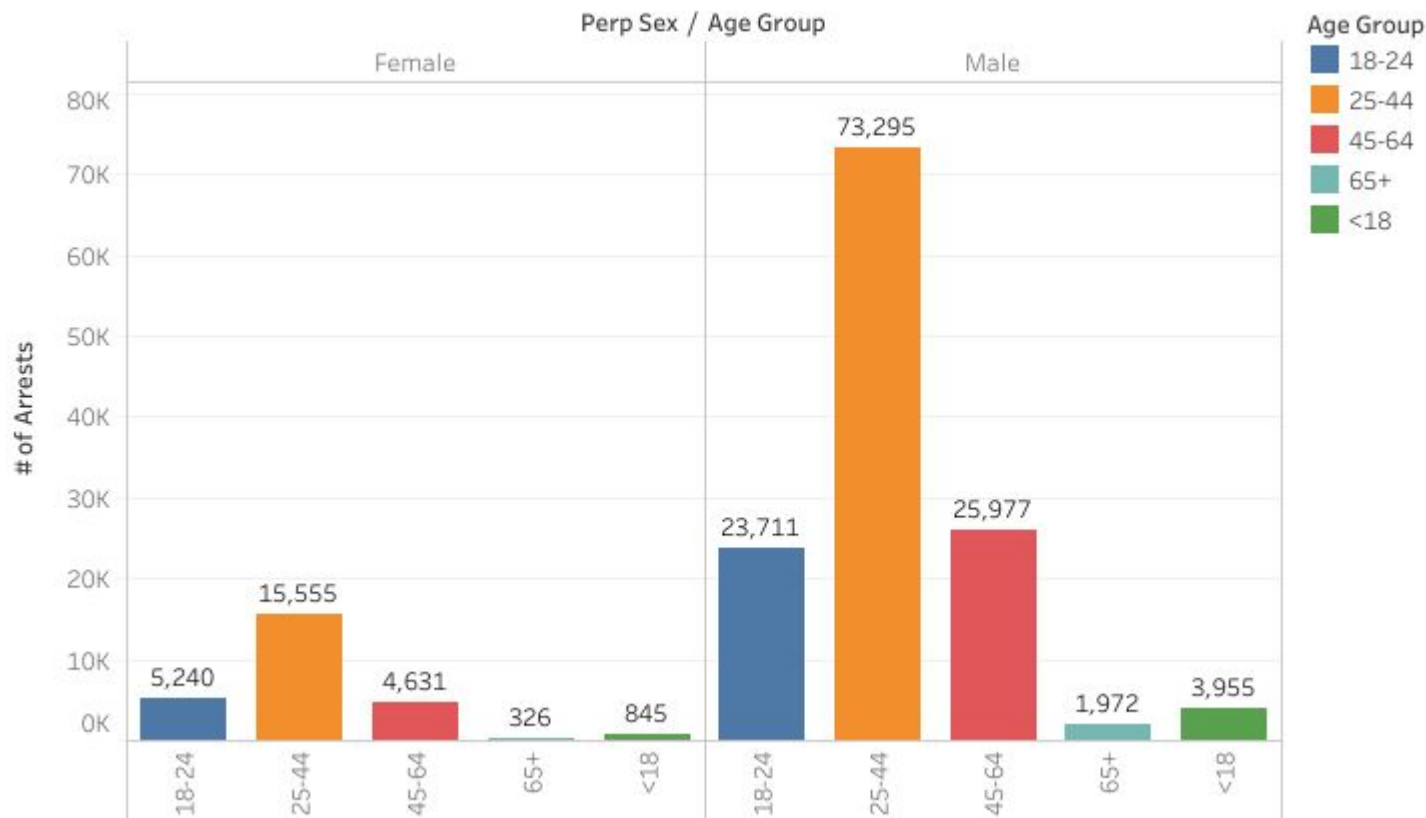
* These are only data for Assault in the 3rd Degree



Age and Sex of Arrests



Age and Sex

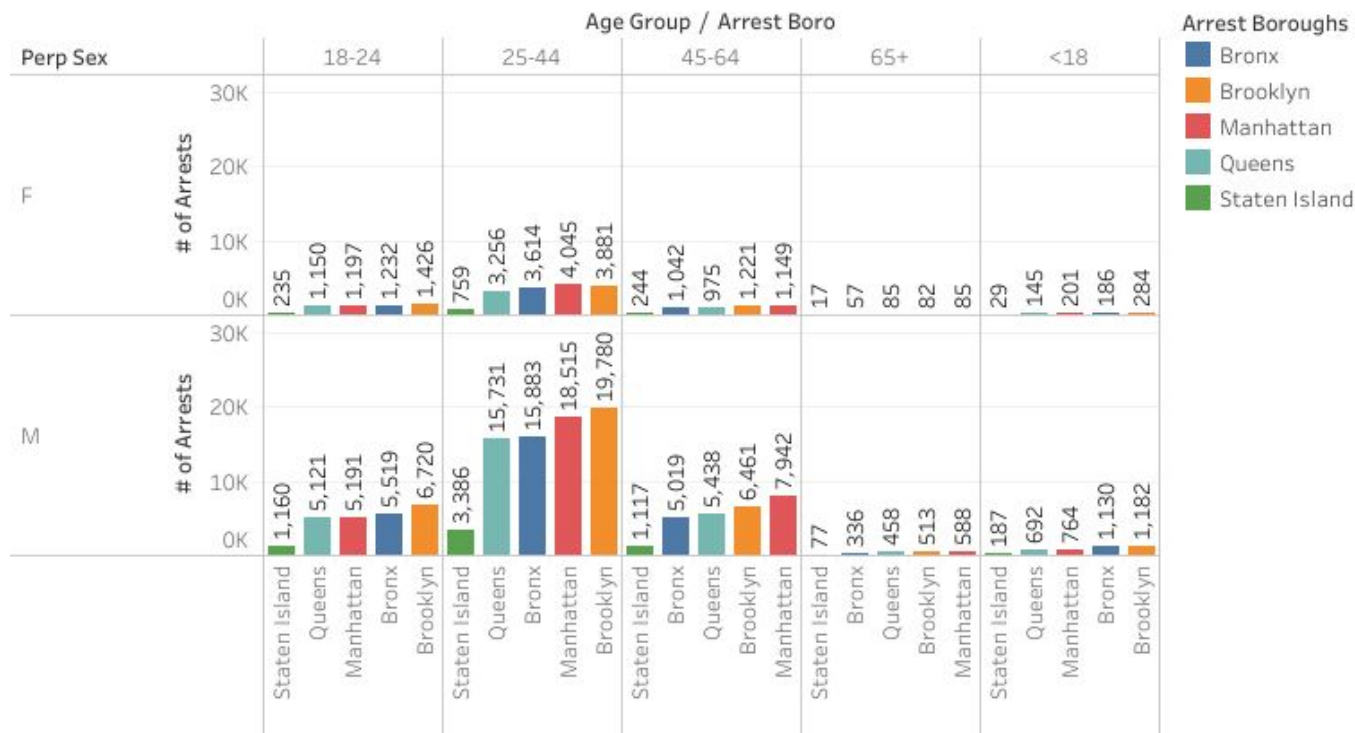


Observations:

- ❖ Males have a higher number of arrests compared to females.
- ❖ For both sexes, the 25-44 age group has the highest number of arrests.



Sex and Age Group in Boroughs

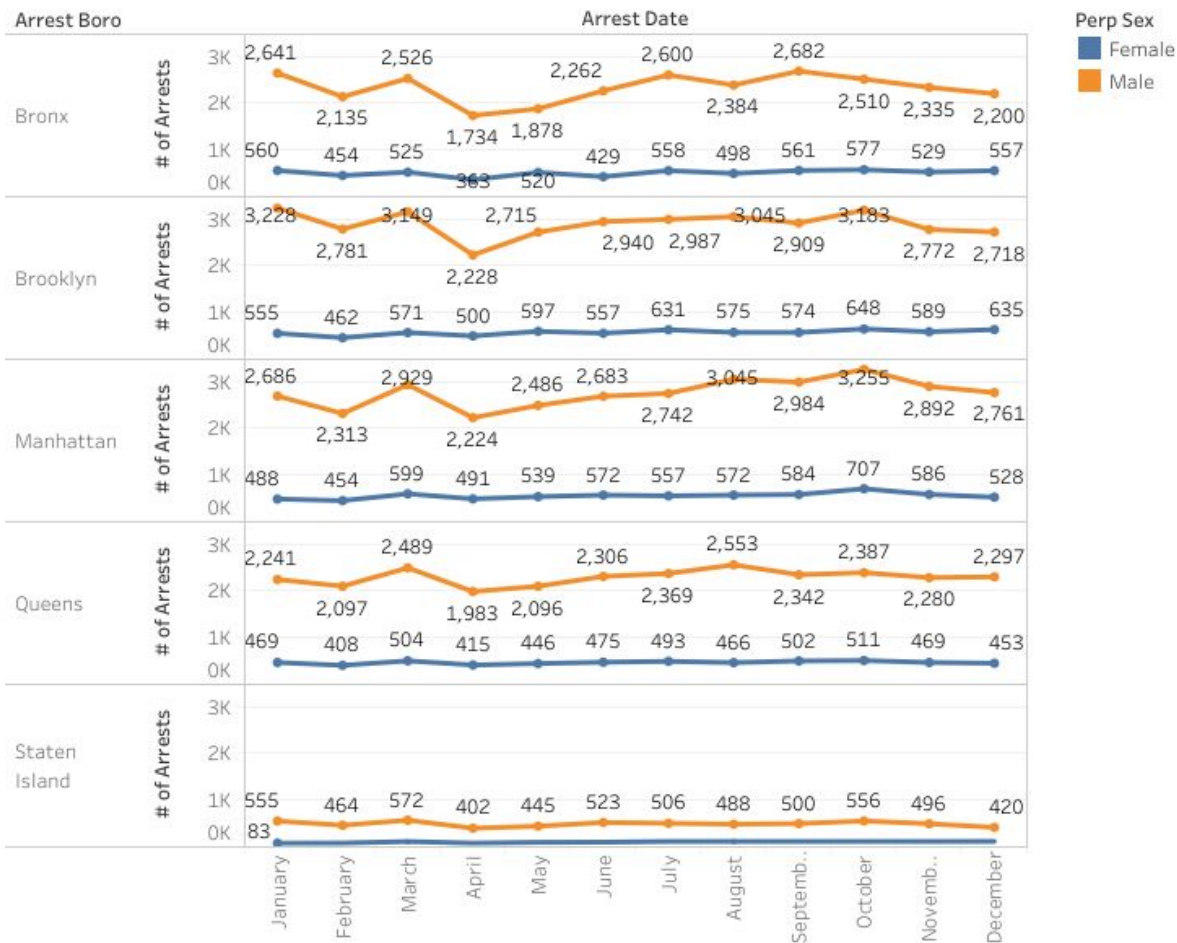


Observations:

- ❖ The highest number of arrests for Males in 25-44 was in Brooklyn and for Females in the 25-44 age group was in Manhattan.



Crime Over Time



Observations:

For Males:

- ❖ The number of arrests fluctuates greatly within the year.
- ❖ April had the lowest number of arrests.

For Females:

- ❖ The number of arrests remain stagnant within the year.



Conclusion & Recommendations



Conclusions

As we can see the majority of arrested people in 2021 in NYC were black males in the age group 25-44, who originate from low-income and high crime neighborhoods with the majority of inhabitants being people of color.

From the data that we analyzed, we can concluded that arrests in NYC of 2021 are influenced by:

- ❖ Location
- ❖ Time
- ❖ Race
- ❖ Age
- ❖ Sex



Recommendations

- As we can see the majority of arrested people in 2021 in NYC were black males in the age group 25-44, who originate from low-income and high crime neighborhoods with the majority of inhabitants being people of color. These neighborhoods need more investments in schools and education. People in these neighborhoods also need easy access to qualified social workers and psychologists, who would help people to deal with their everyday problems. It is also worth to invest into educational and training programs for those who already committed crimes and went to jail before. These kinds of programs could help these people start a new life and let them have a steady income without breaking the law. It could also be useful to organize job fairs as a part of these programs. This way, those who went to jail before would stop seeing crimes as the only way to make a living. It is also recommended to give additional financial resources to local police precincts to let them hire more police officers and provide additional training for all the officers.
- To prevent larcenies we would recommend conducting a campaign during which the leaflets would be distributed, and advertising billboards would be used to increase the awareness of tourists about larcenies in the areas, to remind them to keep an eye on their pockets and bags at all times. The increase of police officers on the streets in these areas could also be an additional measure. The same recommendation to increase the amount of police officers in the streets also goes for the areas with multiple bars and restaurants.



Recommendations

Let's sum it up. From the data we analyzed we can recommend to the Police Commissioner of New York some advice based off of the data:

- ❖ Allocate funds for education and social work for the poor neighborhoods to reduce that amount of arrests of people of color.
- ❖ Invest money into education and training programs for those who went to jail before such as job fairs.
- ❖ Increase police presence and run a campaign to bring awareness to robberies (ie. leaflets and advertising billboards) around tourist areas.
- ❖ Increase police presence in the areas with multiple bars and restaurants to prevent possible crimes under the influence of alcohol.
- ❖ Provide more funding to precincts in boroughs that have more crime and combat overcrowding by opening more precincts.
- ❖ Provide additional training to police officers.



Thank you!

Questions?



Resources

- Hutchinson, Bill. "Blacks Account for Nearly Half of All NYC Arrests 6 Years after End of Stop-and-Frisk: NYPD Data." *ABC News*, ABC News Network,
<https://abcnews.go.com/amp/US/blacks-account-half-nyc-arrests-years-end-stop/story?id=71412485>.
- Wikipedia:

https://en.wikipedia.org/wiki/Wakefield,_Bronx

https://en.wikipedia.org/wiki/Mott_Haven,_Bronx

https://en.wikipedia.org/wiki/East_Tremont,_Bronx

https://en.wikipedia.org/wiki/Williamsbridge,_Bronx

https://en.wikipedia.org/wiki/East_New_York,_Brooklyn

https://en.wikipedia.org/wiki/Flatbush,_Brooklyn

https://en.wikipedia.org/wiki/Woodside,_Queens

https://en.wikipedia.org/wiki/Concourse,_Bronx

