M8 Project Work Are You Misusing Visualizations?
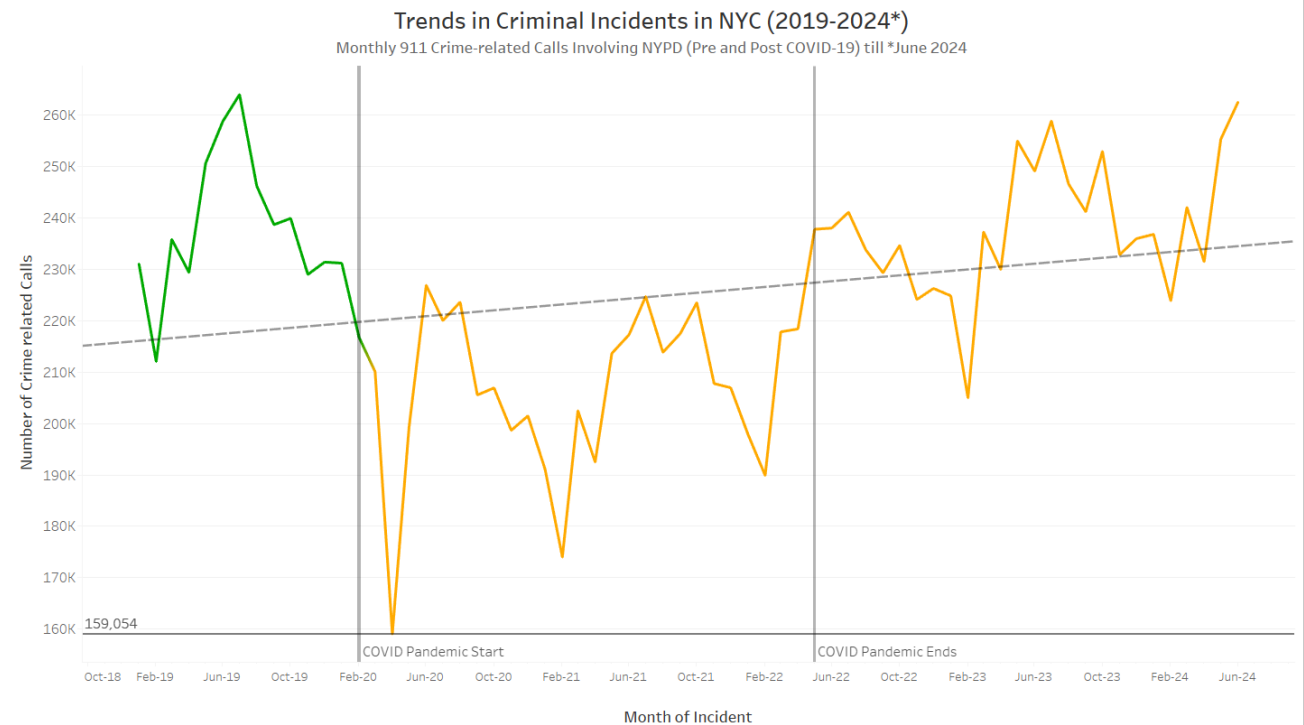
Group-6 (Team Sherlock's)

- Tushar Ahuja

- Aswin Karthik Panneer Selvam

- Nandini Reddy Basupally

- Shashank Shekhar

VIZ 1

Trends in Criminal Incidents in NYC (2019-2023)
Monthly 911 Crime-related Calls Involving NYPD (Pre and Post COVID-19)

Pre-Covid VS Post-Covid
0.000 — 1.000

Trends in Criminal Incidents in NYC (2019-2024*)
Monthly 911 Crime-related Calls Involving NYPD (Pre and Post COVID-19) till *June 2024

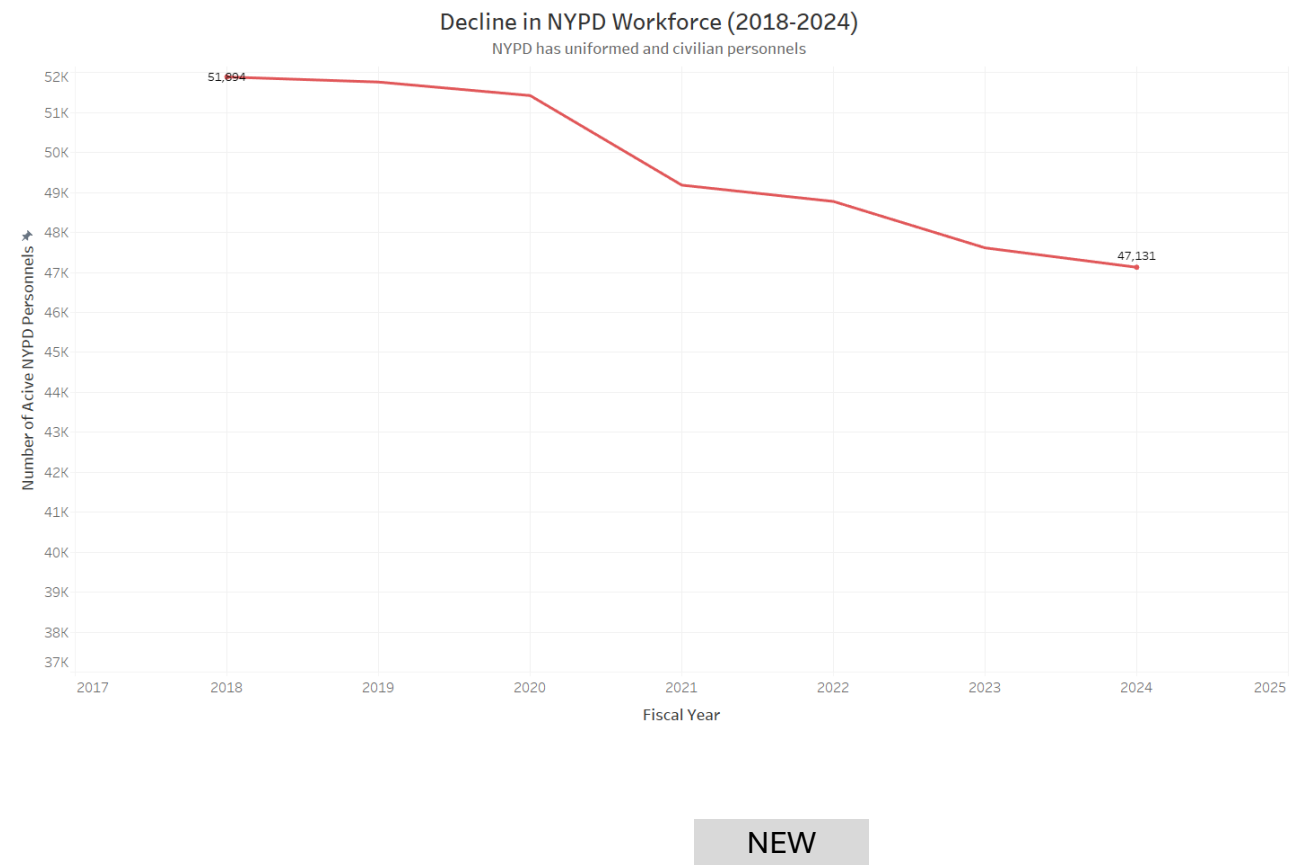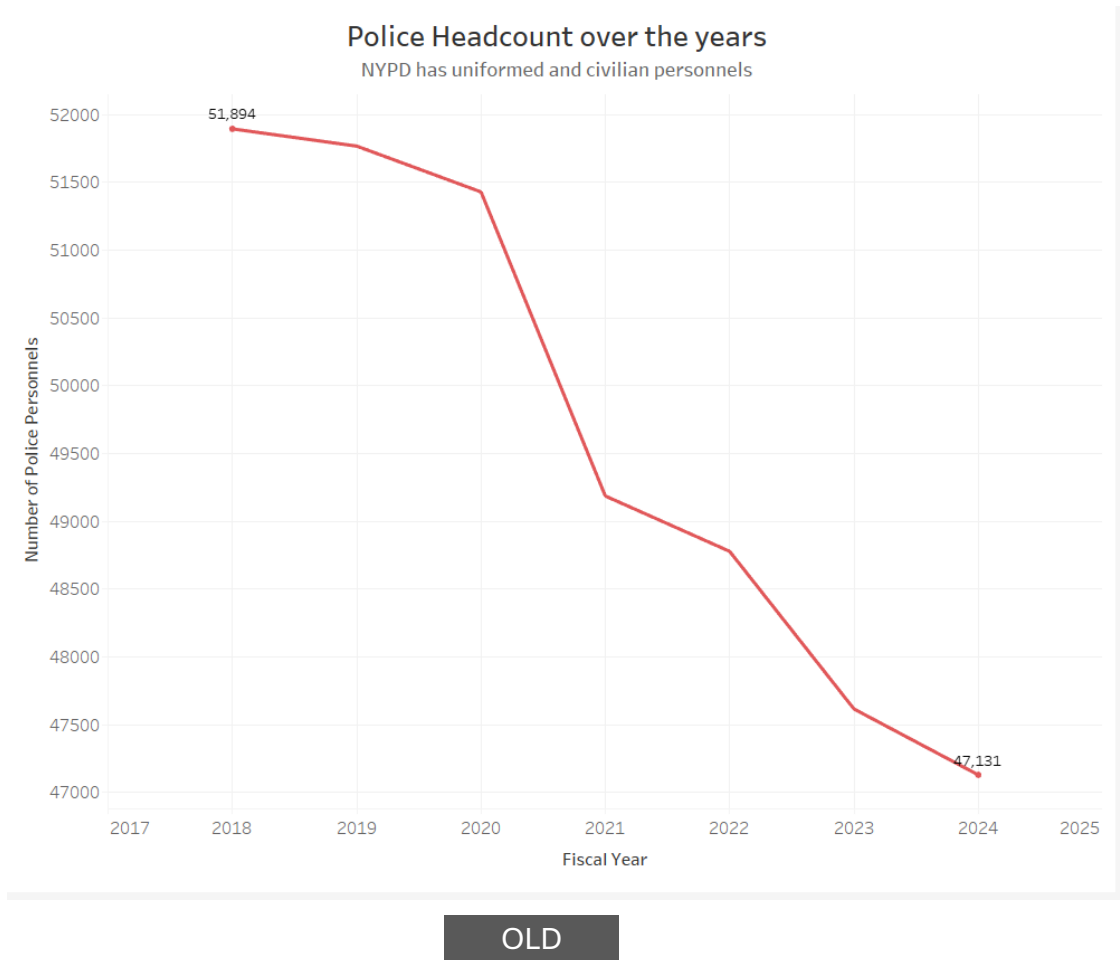COVID Pandemic Start   COVID Pandemic Ends

159,054

OLD

NEW

Reason
- Modified the legend which was misleading as a range instead of category
- Added the COVID Pandemic Start and End region in the graph
- Colors were modified to show the positive(Green) and negative(Orange) aspect and more color friendly to the color blind
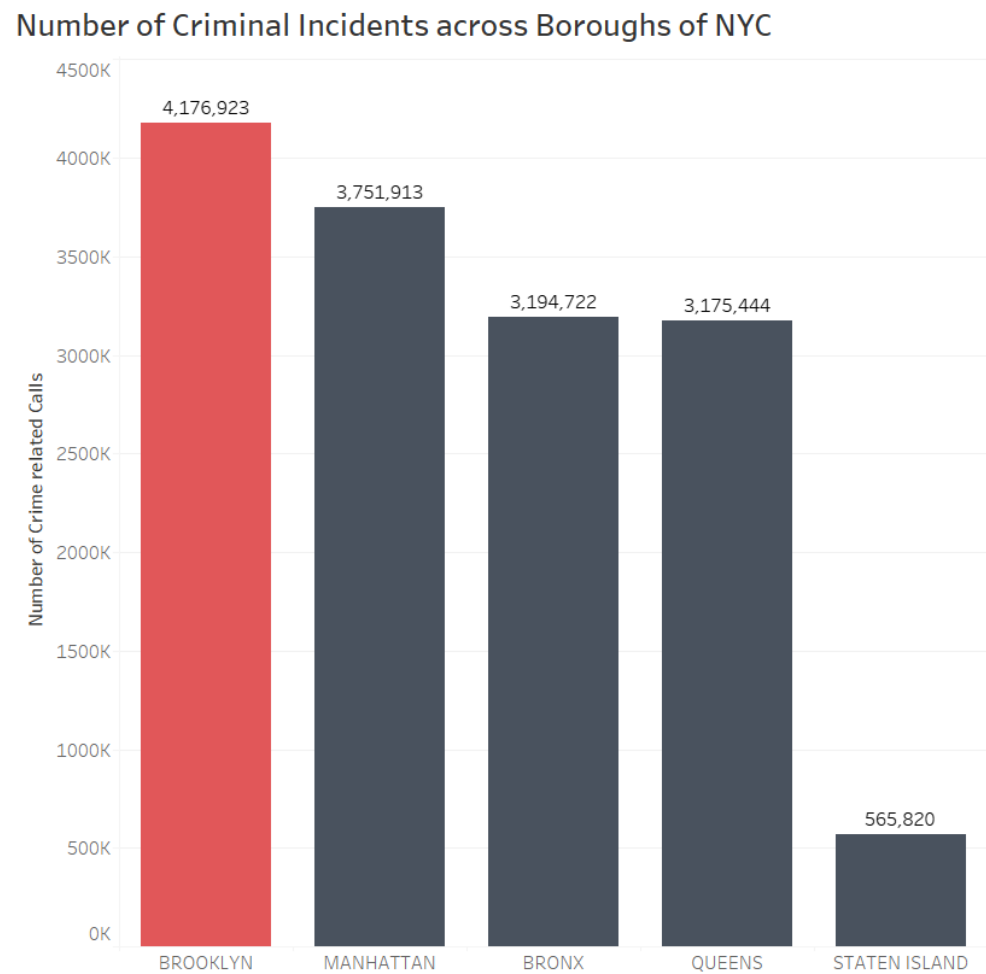
VIZ 2

Police Headcount over the years
NYPD has uniformed and civilian personnels

OLD

Decline in NYPD Workforce (2018-2024)
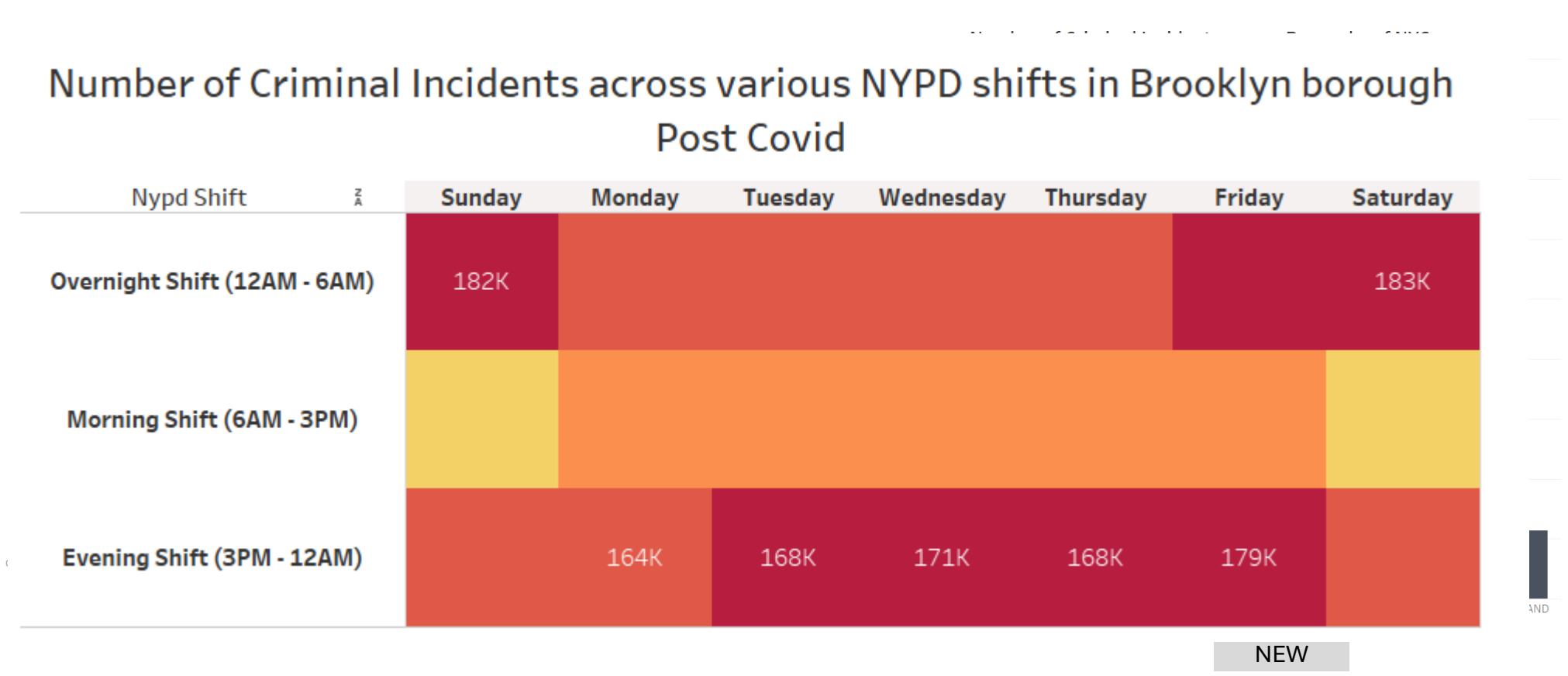### NYPD has uniformed and civilian personnels

NEW

Reason

- Showing a more realistic version of the graph, where the decline is evident, but it is not very steep as depicted in the previous version.
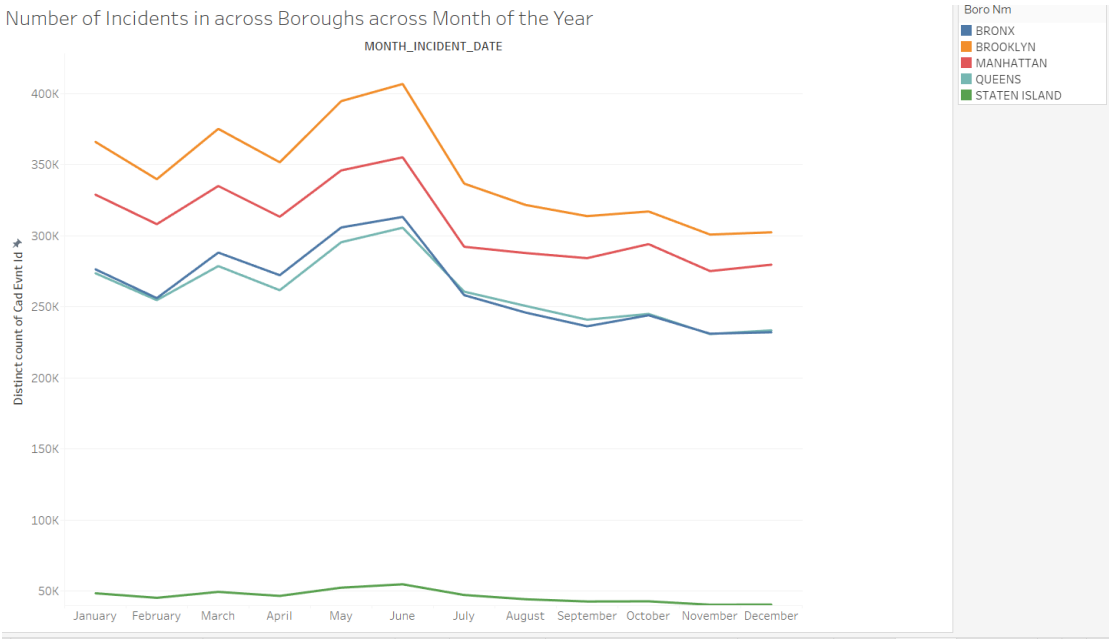
VIZ 3

Number of Criminal Incidents across Boroughs of NYC

Reason
- The chart looks good, highlights the maximum value for Brooklyn to focus on that

VIZ 4

Number of Criminal Incidents across various NYPD shifts in Brooklyn borough Post Covid

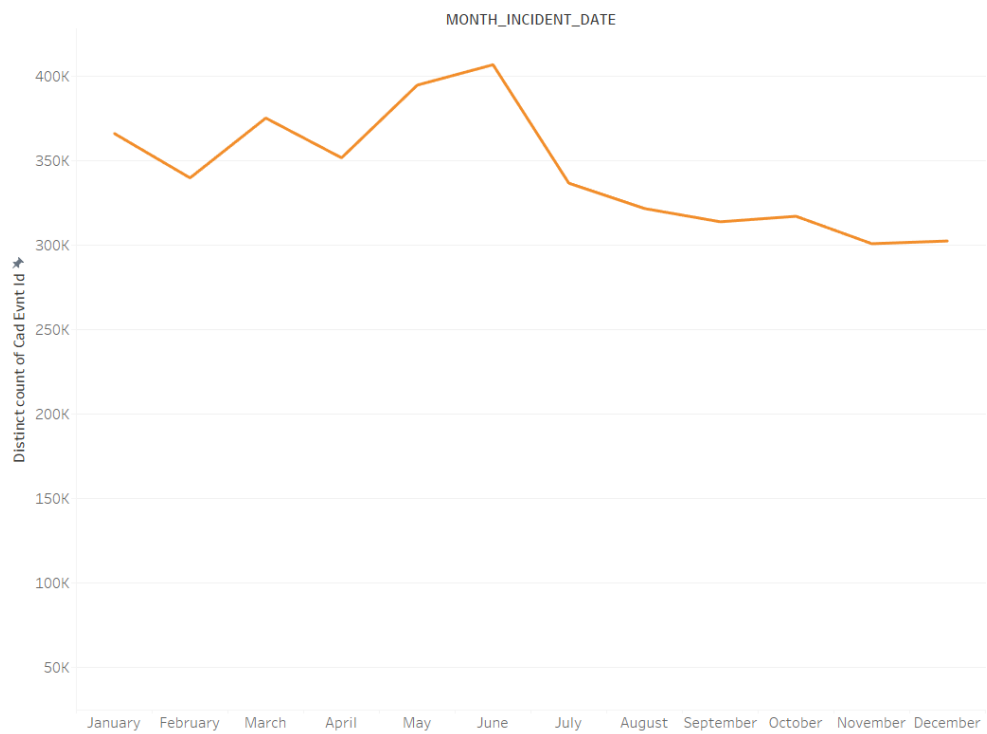| Nypd Shift	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Overnight Shift (12AM - 6AM)	182K						183K
Morning Shift (6AM - 3PM)							
Evening Shift (3PM - 12AM)		164K	168K	171K	168K	179K	

NEW

Reason
- The bar chart was ranked in descending order to shows the number of criminal incidents across boroughs of New York City.

VIZ 5

Number of Incidents in across Boroughs across Month of the Year

Number of Incidents in Brooklyn Borough across Month of the Year

Reason
- The line graph shows serious and critical call by NYC Brooklyn borough . Earlier it was showing for all borough in NYC.

TABLE 1

Police Headcount over the Years

	2018	2019	2020	2021	2022	2023	2024
Overall Headcount	51,894	51,767	51,429	49,187	48,779	47,617	47,131
Civilian Headcount	15,251	15,306	15,519	14,329	13,954	13,820	13,488
Uniform Headcount	36,643	36,461	35,910	34,858	34,825	33,797	33,643

Reason
No changes in table, since it's updated from M4 to M5 and there are not feedback for M5

TABLE 2

Number of Criminal Incidents across various NYPD shifts

OLD

Day Of Week	Evening Shift	Morning Shift	Overnight Shift	Total
Sunday	709,750	518,893	829,985	2,058,628
Monday	750,072	612,311	709,816	2,072,199
Tuesday	775,315	625,629	691,839	2,092,783
Wednesday	783,440	624,818	700,511	2,108,769
Thursday	779,095	623,255	712,151	2,114,501
Friday	833,091	638,867	762,198	2,234,156
Saturday	765,618	569,821	848,347	2,183,786
Total	5,396,381	4,213,594	5,254,847	14,864,822

Number of Criminal Incidents across various NYPD shifts

NEW

Day Of Week	Overnight Shift (12AM - 6AM)	Morning Shift (6AM - 3PM)	Evening Shift (3PM - 12AM)	Total
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Monday	709,816	612,311	750,072	2,072,199
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Reason
- The columns are order in chronological order.
- Shift timings are added to the column names to improve clarity of information

TABLE 3

NYC Crime Incidents by Borough and Day of Week (Cumulative Total)

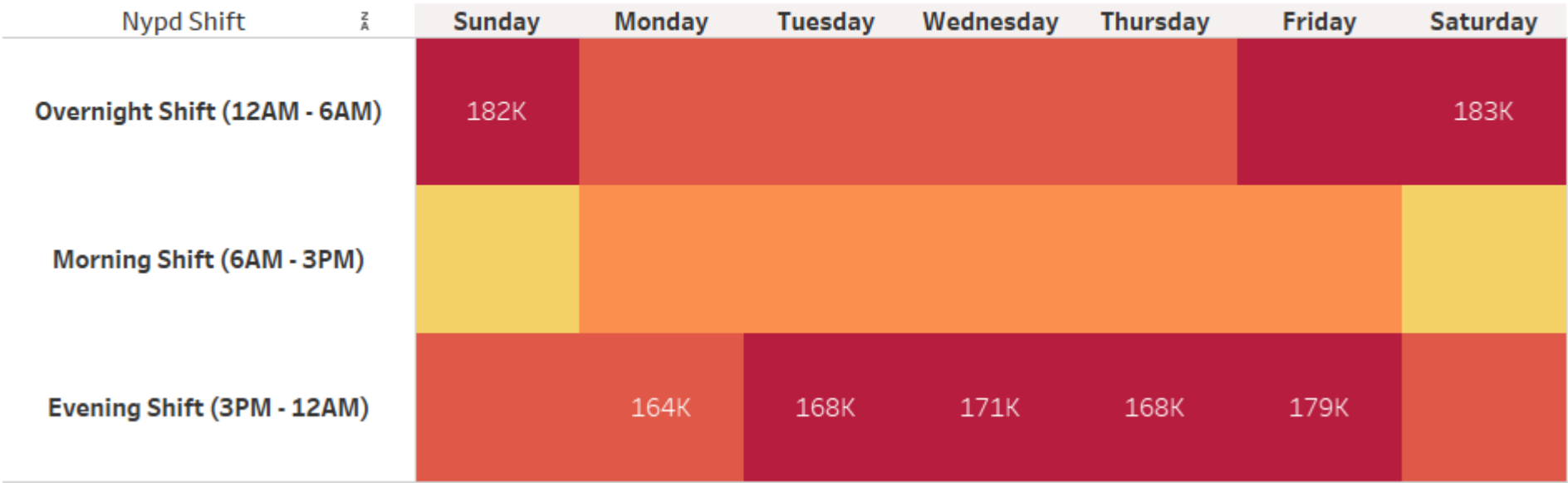Data covers reported criminal incidents from [2019-2023] across five NYC boroughs.

	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Total
BRONX	444,299	446,544	449,672	452,711	452,131	478,298	471,067	3,194,722
BROOKLYN	576,745	586,443	591,558	595,612	595,712	628,080	602,773	4,176,923
MANHATTAN	509,164	516,654	530,640	536,174	540,594	567,911	550,776	3,751,913
QUEENS	451,184	443,348	441,324	443,536	445,465	474,744	475,843	3,175,444
STATEN ISLAND	77,236	79,210	79,589	80,736	80,599	85,123	83,327	565,820
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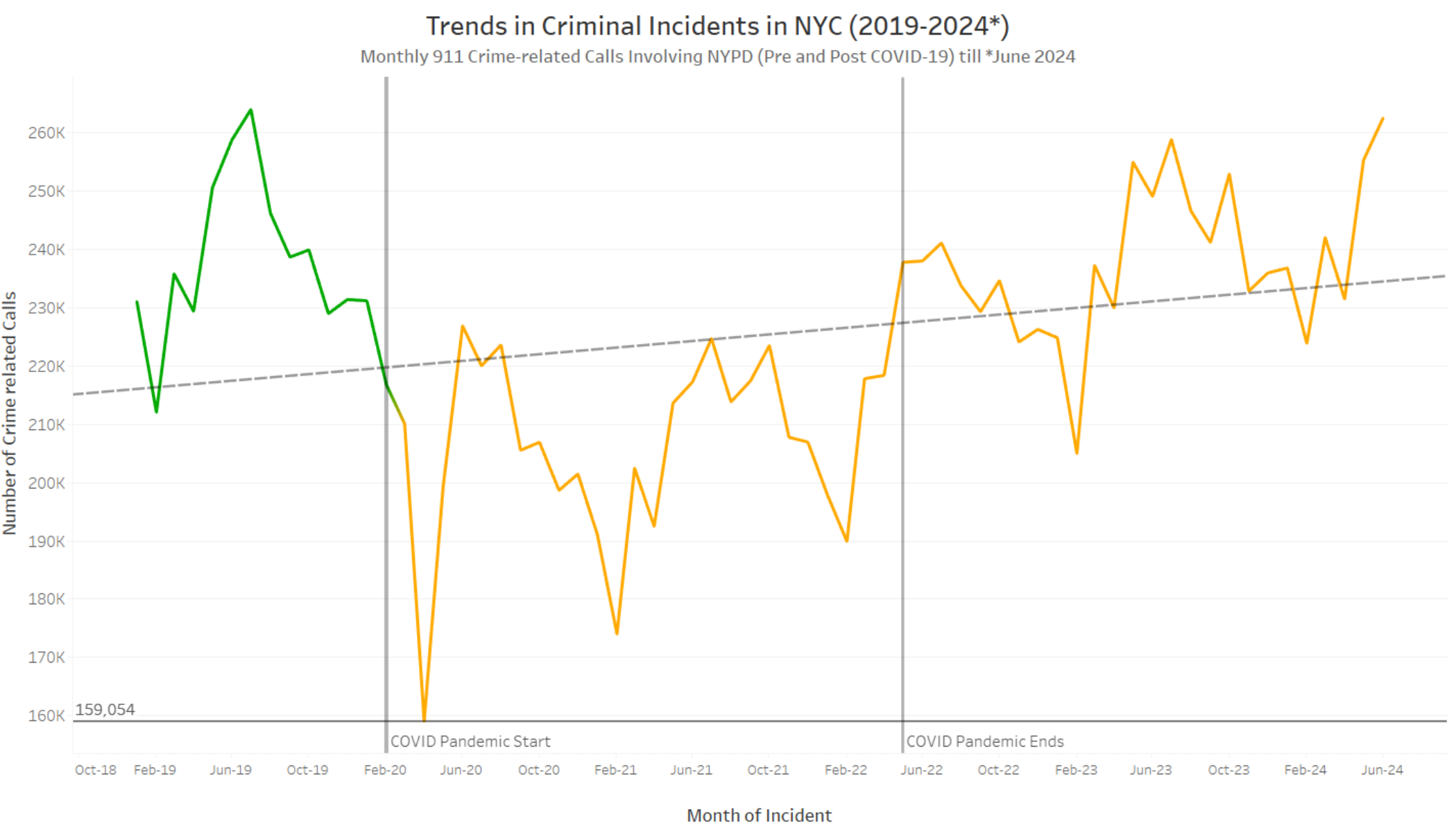
VIZ 4 - NEW ADDITION

Number of Criminal Incidents across various NYPD shifts in Brooklyn borough Post Covid

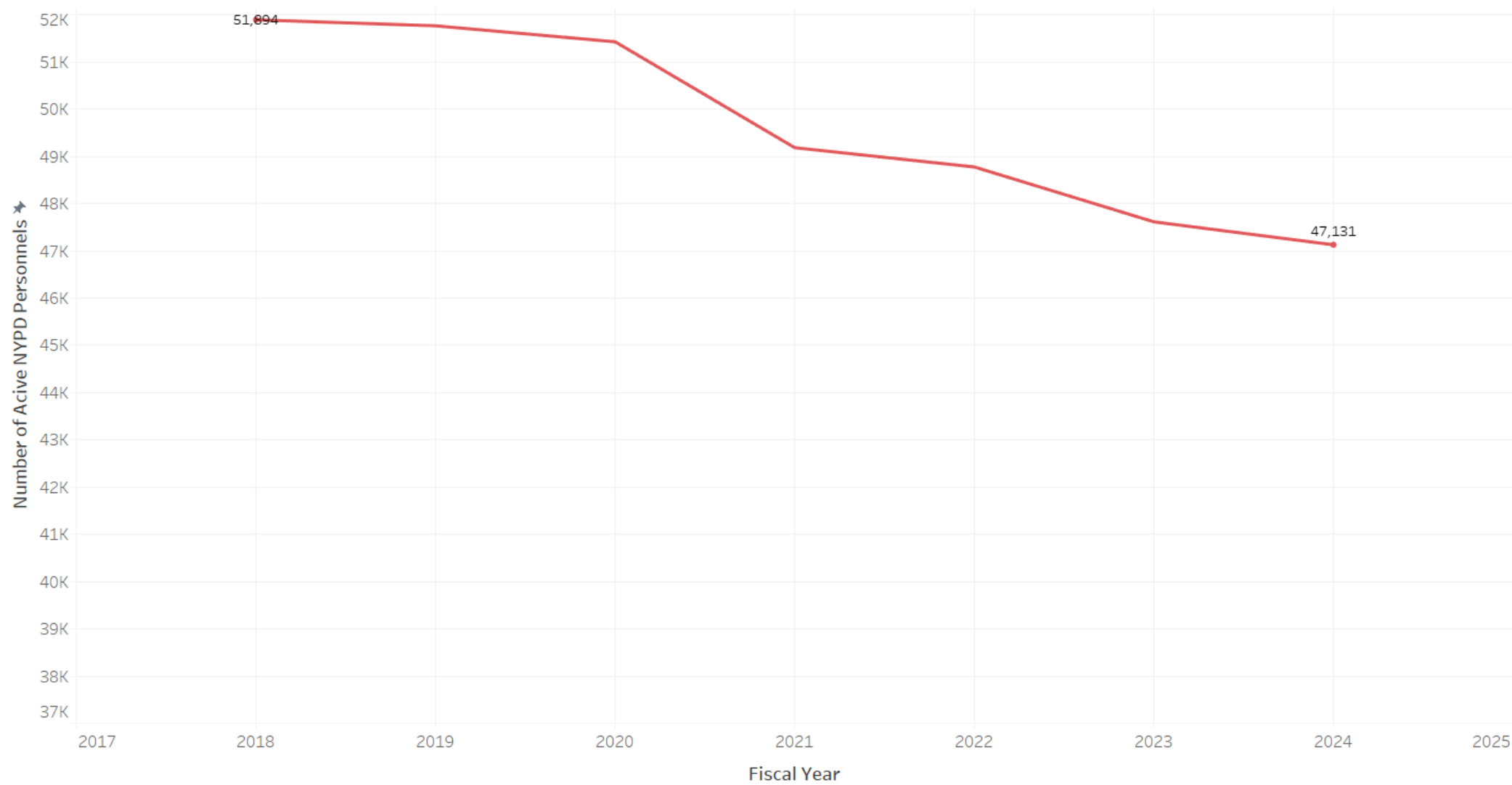| Nypd Shift	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
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Comments

This heatmap shows the number of crimes across NYPD shift and days of week in Brooklyn borough where the number of crimes were the highest (as shown in Viz 3)

New Visualizations - Individual

VIZ 1

Trends in Criminal Incidents in NYC (2019-2024*)
Monthly 911 Crime-related Calls Involving NYPD (Pre and Post COVID-19) till *June 2024

COVID Pandemic Start

COVID Pandemic Ends

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Number of Crime related Calls

Month of Incident

VIZ 2

Decline in NYPD Workforce (2018-2024)

NYPD has uniformed and civilian personnels

VIZ 3
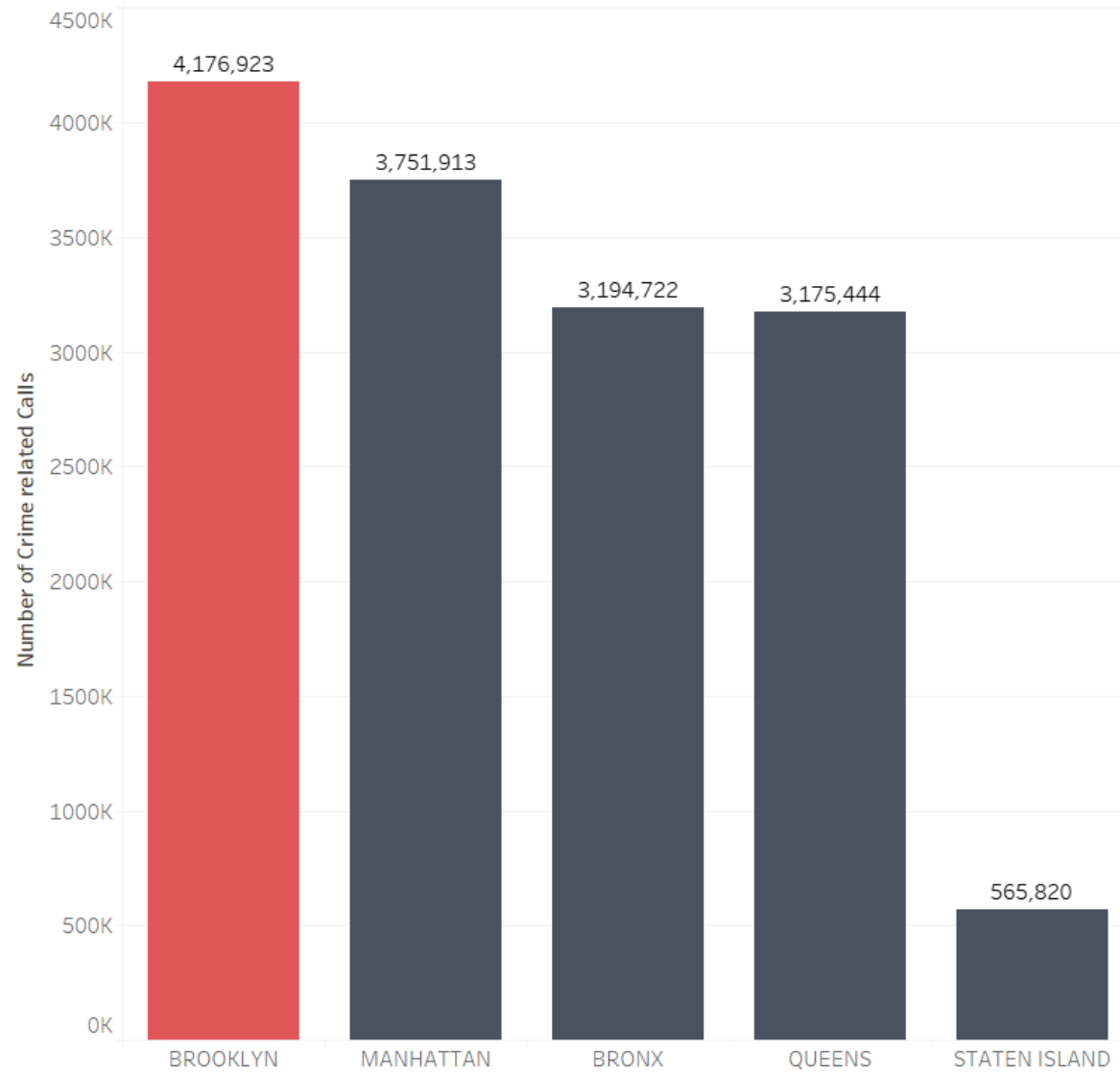
Number of Criminal Incidents across Boroughs of NYC

Bar chart showing Number of Crime related Calls across NYC boroughs:
- BROOKLYN: 4,176,923
- MANHATTAN: 3,751,913
- BRONX: 3,194,722
- QUEENS: 3,175,444
- STATEN ISLAND: 565,820

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VIZ 5

Number of Incidents in Brooklyn Borough across Month of the Year

MONTH_INCIDENT_DATE