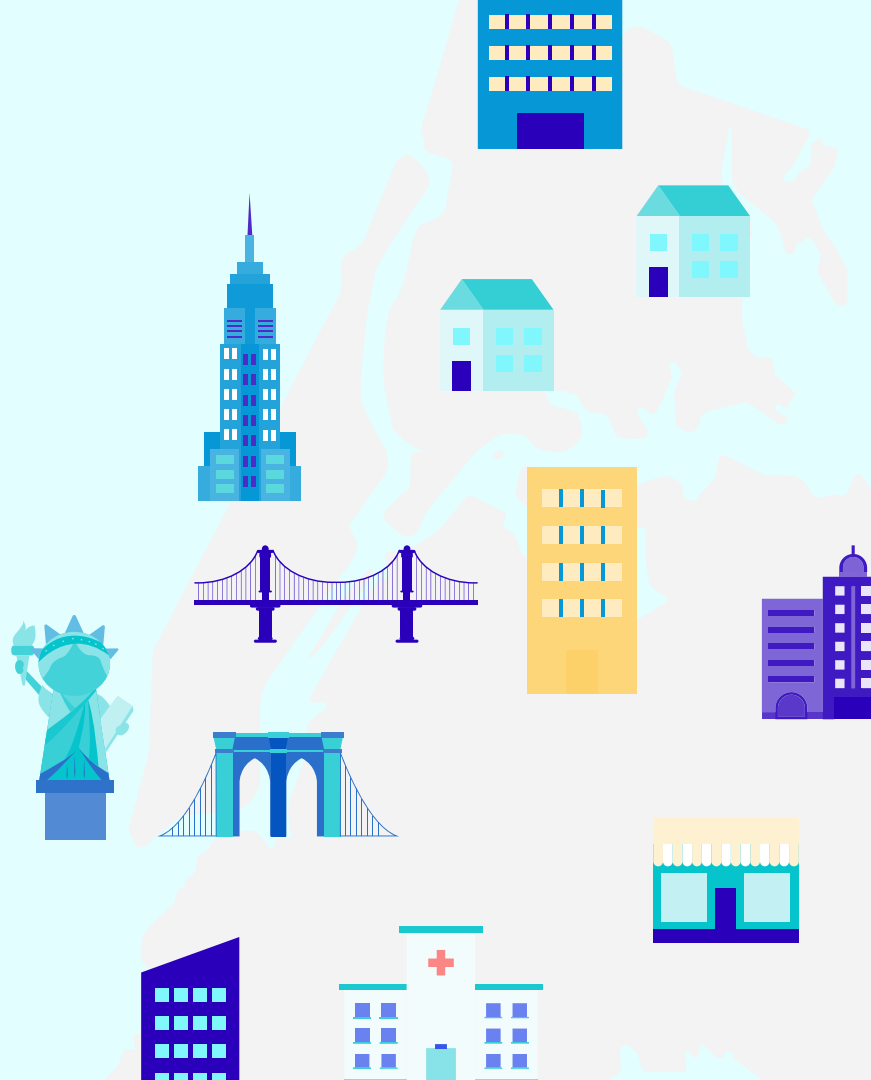


COMPLAINT OUTCOME PREDICTION FOR CIVILIAN COMPLAINTS AGAINST NYPD

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AMAN LAIQ MOHAMMED
ANIMESH NEMA

Project Github Link: [Complaint Outcome Prediction](#)



WHY SHOULD YOU CARE?

Figure 03: Total Filings and Complaints Received

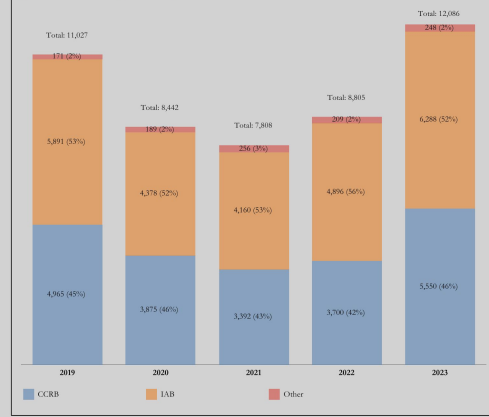


Figure 26: Disposition of Fully Investigated Complaints

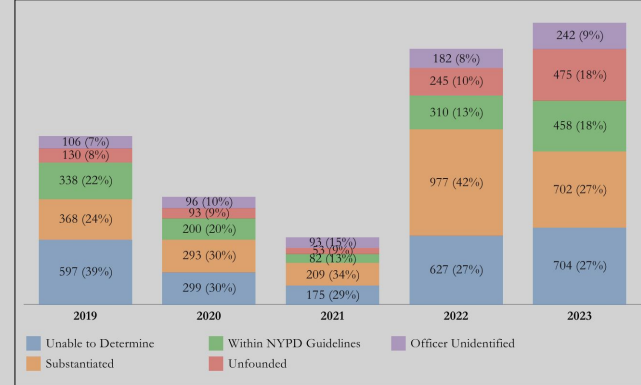


Figure 34: Board Recommendations for Officers with Substantiated Allegations

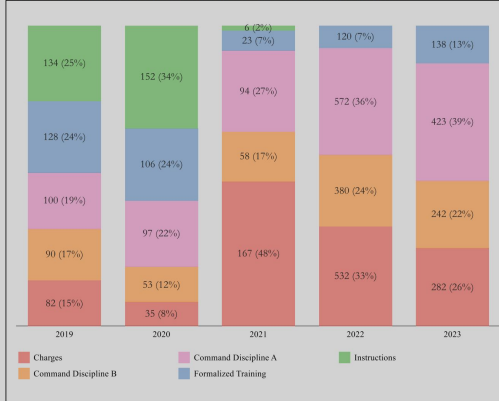
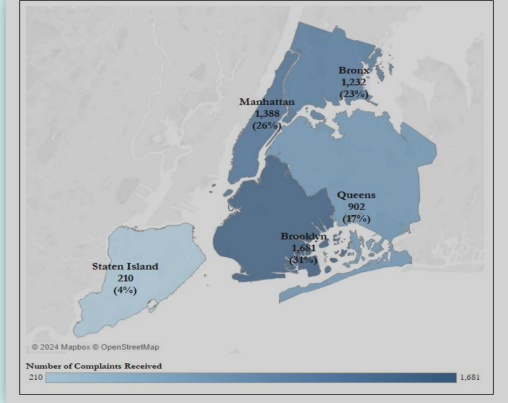


Figure 06: Complaints Received within CCRB Jurisdiction by Borough



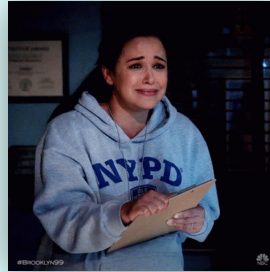
TYPES OF CIVILIAN COMPLAINTS AGAINST NYPD

3,996

Total officers

12,056

Total complaints in this database



Offensive Language 753 allegations

An officer used one or more slurs relating to race, ethnicity, gender, religion, sexual orientation or disability.

Allegation Type	Total
Race	307
Gender	115
Ethnicity	84
Sexual Orientation	78
Black	56
Other	48
Physical Disability	15
Religion	14
Other Ethnic Slur	11

Force 7,636 allegations

An officer used excessive or otherwise unnecessary force.

Allegation Type	Total
Physical Force	4,849
Gun Pointed	628
Pepper Spray	324
Nightstick As Club (Incl Asp & Baton)	260
Chokehold	244
Push/Shove	178
Hit Against Inanimate Object	176
Other Force	134
Other	124

Abuse of Authority 20,292 allegations

An officer used police powers to take unwarranted actions, such as an unlawful search.

Allegation Type	Total
Stop	2,300
Search (Of Person)	2,047
Frisk	1,926
Premises Entered And/Or Searched	1,555
Refusal To Provide Name/Shield Number	1,483
Threat Of Arrest	1,409
Vehicle Search	1,405
Vehicle Stop	1,094
Threat Of Force (Verbal Or Physical)	912
Question And/Or Stop	696

Discourtesy 4,677 allegations

An officer engaged in rude or profane behavior toward a civilian.

Allegation Type	Total
Word	3,942
Action	316
Curse	202
Nasty Words	88
Gesture	51
Demeanor/Tone	38
Other Discourtesy	18
Other	8

DATA COLLECTED SO FAR

We've collected two datasets for this cause. The first one is the dataset from CCRB themselves about the complaints filed against police officers and the second one pertains to the geographical data of the police precincts for EDA.

1. CCRB Dataset

Dataset Source: Civilian Complaint Review Board (CCRB)

Timeframe of Data: 1985 - 2020

Volume of Data: 33,358 Complaints

Dataset Composition: The primary dataset includes a .csv file accompanied by an Excel file CCRB Data Layout Table for terminology clarification.

2. Additional Geospatial Data: A shapefile dataset appended for precinct geolocation analysis to support exploratory data analysis (EDA).

Accessibility:

- Dataset available through a provided link, containing the .csv file and Excel terminology guide.
- The precinct location data derived from an exported .shp file.

Utilization: The dataset will be instrumental in analyzing patterns and predicting outcomes of civilian complaints against NYPD officers.

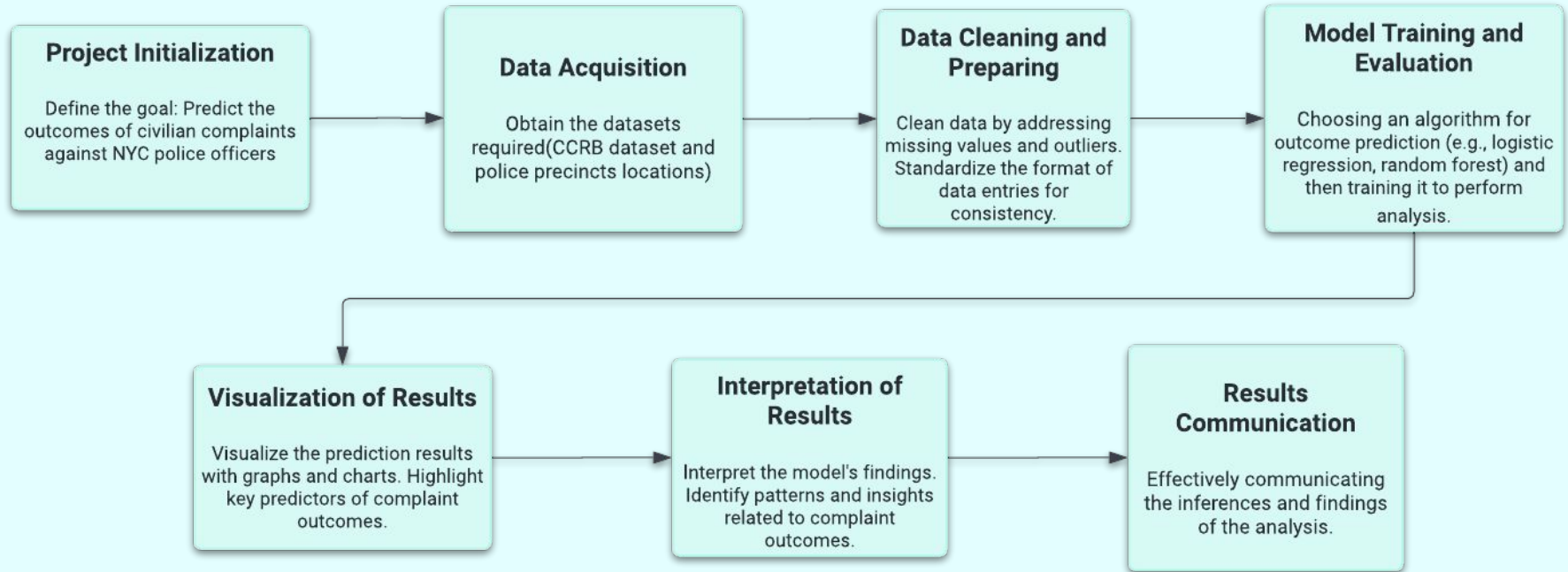
field name	description	glossary		
unique_mos_id	unique ID of the officer ("member of service")			unique_mos_id
first_name	Officer's first name			name
last_name	Officer's last name			command_now
command_now	Officer's command assignment as of July 2020	See Tab 3		complaint_id
complaint_id	Unique ID of the complaint			date_relieved
month_received	Month the complaint was received by CCRB			date_closed
year_received	Year the complaint was received by CCRB			command_at_incident
month_closed	Month the complaint investigation was closed by CCRB			rank_abbrev_incident
year_closed	Year the complaint investigation was closed by CCRB			rank_abbrev_now
command_at_incident	Officer's command assignment at the time of the incident			mos_ethnicity
rank_abbrev_incident	Officer's rank at the time of the incident, abbreviation	See Tab 2		mos_gender
rank_abbrev_now	Officer's rank as of July 2020, abbreviation	See Tab 2		mos_age_incident
rank_now	Officer's rank as of July 2020	See Tab 2		complainant_ethnicity
rank_incident	Officer's rank at the time of the incident	See Tab 2		complainant_gender
mos_ethnicity	Officer's ethnicity			complainant_age_incident
mos_gender	Officer's gender			fado_type
mos_age_incident	Officer's age at time of incident			allegation
complainant_ethnicity	Complainant's ethnicity			precinct
complainant_gender	Complainant's gender			contact_reason
complainant_age_incident	Complainant's age at time of incident			outcome_description
fado_type	Top-level category of complaint	See Tab 4		board_disposition
allegation	Specific category of complaint	See Tab 4		
precinct	Precinct associated with the complaint			
contact_reason	Reason officer made contact with complainant			
outcome_description	Outcome of the contact between officer and complainant			
board_disposition	Finding by the CCRB	See Tab 5		

CCRB Dataset Layout

CCRB Dataset

unique_mos_id	first_name	last_name	command	shield_no	complaint	month_received	year_received	allegation	month_closed	year_closed	command	rank_abbrev_incident	rank_abbrev_now	rank_now	rank_incident	mos_ethnicity	mos_gender	mos_age_incident
10004	Jonathan	Ruiz	078 PCT	8409	42835	7	2019	Failure to provide RTKA card	5	2020	078 PCT	POM	POM	Police Offi	Police Offi	Hispanic	M	32
10007	John	Sears	078 PCT	5952	24601	11	2011	Action	8	2012	PBBS	POM	POM	Police Offi	Police Offi	White	M	24
10007	John	Sears	078 PCT	5952	24601	11	2011	Race	8	2012	PBBS	POM	POM	Police Offi	Police Offi	White	M	24
10007	John	Sears	078 PCT	5952	26146	7	2012	Question	9	2013	PBBS	POM	POM	Police Offi	Police Offi	White	M	25
10009	Noemi	Sierra	078 PCT	24058	40253	8	2018	Physical force	2	2019	078 PCT	POF	POF	Police Offi	Police Offi	Hispanic	F	39
10012	Paula	Smith	078 PCT	4021	37256	5	2017	Refusal to process civilian complaint	10	2017	078 PCT	SGT	SGT	Sergeant	Sergeant	Black	F	50
10014	Malachy	Sullivan	078 PCT	4143	33969	11	2015	Sexual orientation	2	2016	078 PCT	POM	POM	Police Offi	Police Offi	White	M	43
10017	Fazle	Tanim	078 PCT	15187	40070	8	2018	Word	11	2018	078 PCT	POM	POM	Police Offi	Police Offi	Asian	M	34
10017	Fazle	Tanim	078 PCT	15187	41927	3	2019	Refusal to provide shield number	8	2019	078 PCT	POM	POM	Police Offi	Police Offi	Asian	M	35
10017	Fazle	Tanim	078 PCT	15187	41927	3	2019	Retaliatory summons	8	2019	078 PCT	POM	POM	Police Offi	Police Offi	Asian	M	35
10018	Shmuel	Tenenbaur	078 PCT	4518	36984	4	2017	Refusal to provide name/shield number	11	2017	078 PCT	POM	POM	Police Offi	Police Offi	White	M	35
10018	Shmuel	Tenenbaur	078 PCT	4518	36984	4	2017	Sexual orientation	11	2017	078 PCT	POM	POM	Police Offi	Police Offi	White	M	35

APPROACH



CONCLUSION

- Enhance the efficiency and effectiveness of investigations:
By enabling the prioritization of cases with a higher likelihood of substantiation, thus optimizing resource allocation and ensuring that agencies like the CCRB can focus their efforts where they are most needed.
- Uncover systemic issues:
By identifying patterns and trends in complaints, predictive analytics help law enforcement agencies to uncover systemic issues, leading to targeted interventions that can prevent future misconduct.
- Promotes accountability, transparency, and improved decision-making:
It's essential for building and maintaining public trust in law enforcement, thereby fostering stronger, more positive relationships between the police and the communities they serve.



Any Questions?



