BY JUSTIN WONG

DO KNICK GAMES IMPACT CRIME RATES IN SURROUNDING AREAS?

AGENDA
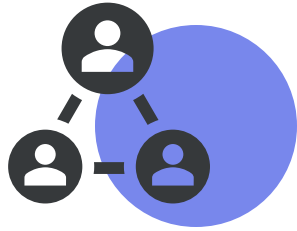
INTRO

As a sports fan, I'm really intrigued by what happens after sporting events. After seeing the chaos unfold on social media following games, I wanted to investigate this phenomenon further.

HOW WE GET THERE

TRACTABLE DATA

- The crime data from NYPD CompStat and game data from sources like ESPN are publicly available

- The dataset includes comprehensive crime statistics and detailed game information

DATA RETRIVEL

- In order to get GameDay data I utilized Selenium to web scrape ESPN for the 2023-2024 season

- In order to access crime data I was able to find an API posted by the NYPD filing crime data in 2024
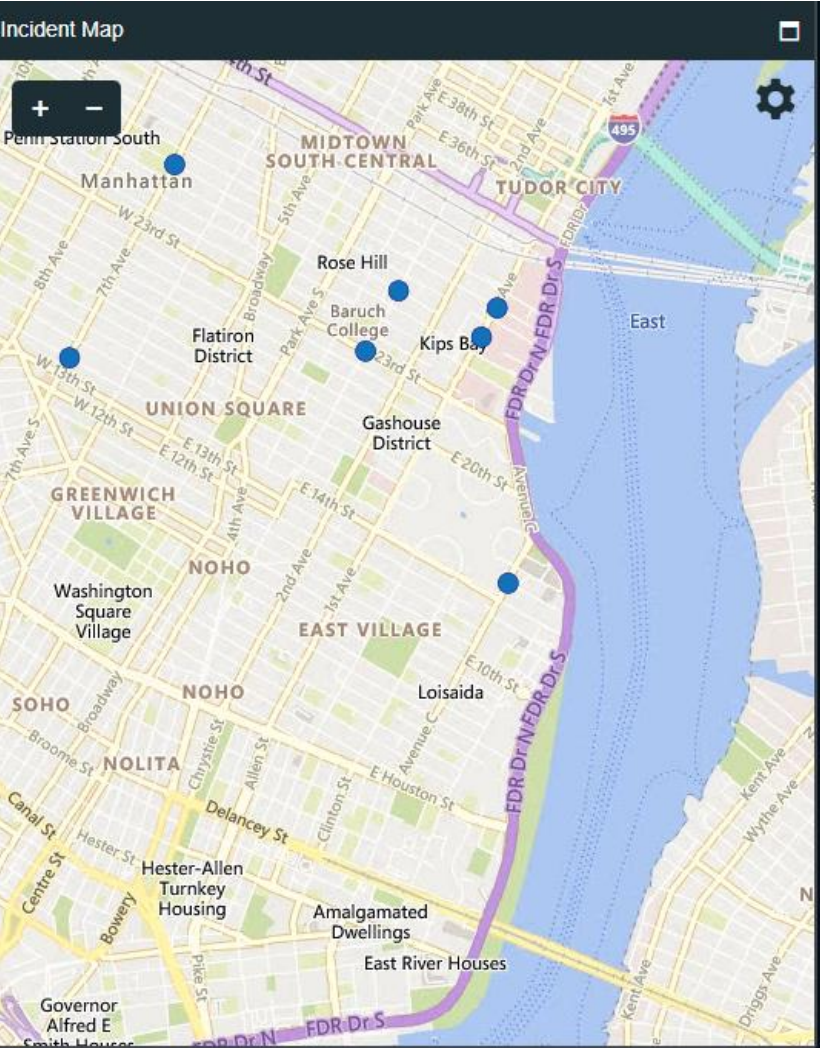
MERGING DATASETS

- To Merge the two different datasets, I performed an inner merge

- Any game day without an arrest will be dropped from the final dataset.

EXPLORATORY DATA ANALYSIS

2025 Attendance		Home				Road			Overall		
RK	TEAM	GMS	TOTAL	AVG	PCT	GMS	AVG	PCT	GMS	AVG	PCT
1	Mavericks	28	562,353	20,084	--	28	18,217	--	56	19,167	--
2	76ers	27	535,260	19,824	--	27	17,798	2669.7	54	18,811	5643.4
3	NY Knicks	29	574,548	19,812	--	25	18,545	--	54	19,225	--
4	Bulls	29	573,474	19,774	--	26	18,001	2600.2	55	18,936	5786.2
5	Nuggets	27	533,546	19,760	--	28	18,117	2818.3	55	18,924	5782.5
6	Heat	23	453,444	19,714	--	30	18,074	3012.5	53	18,786	5531.6
7	Cavaliers	29	563,528	19,432	--	25	18,496	--	54	18,998	--
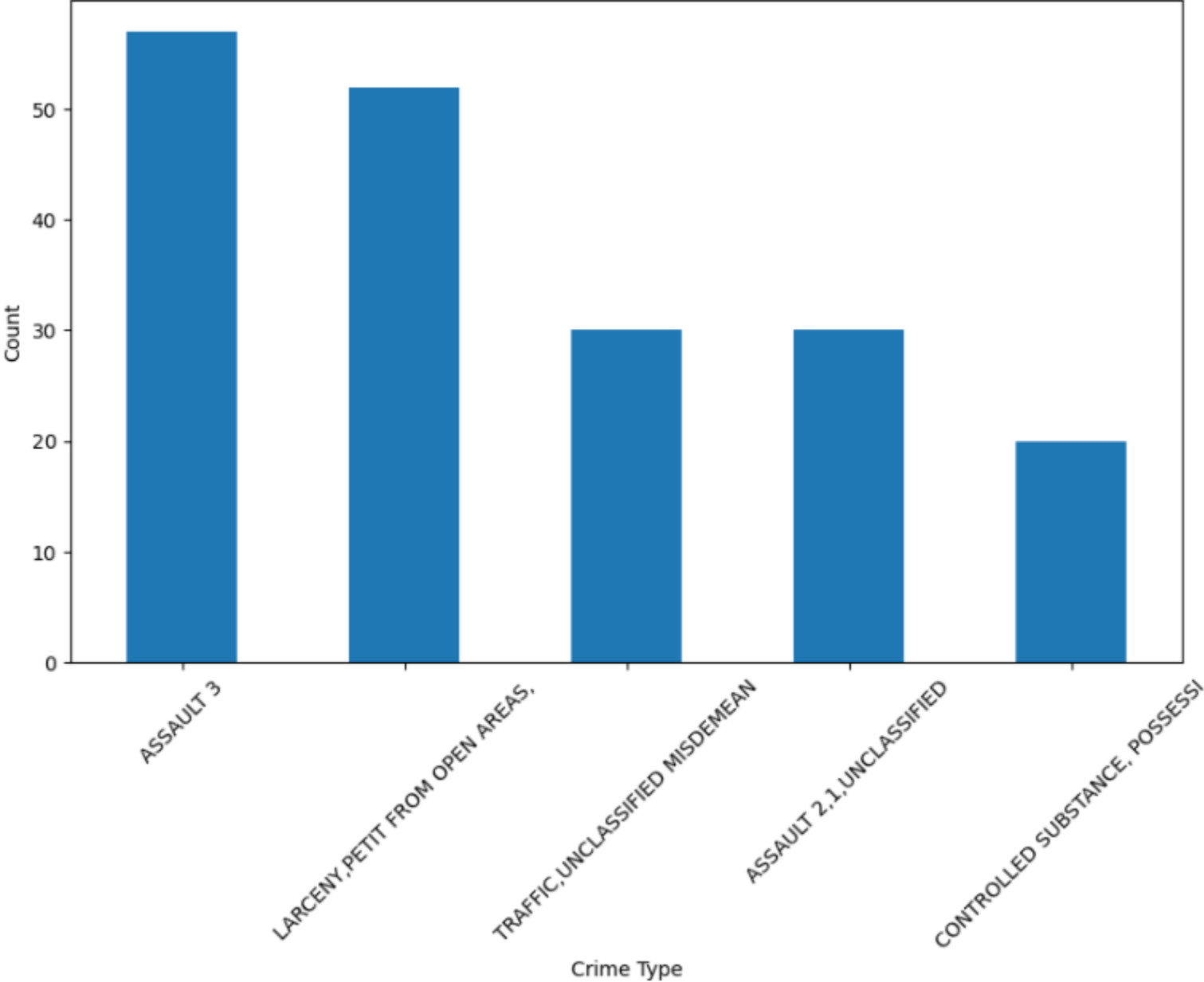
pd_desc
ASSAULT 3   57
LARCENY,PETIT FROM OPEN AREAS,   52
TRAFFIC,UNCLASSIFIED MISDEMEAN   30
ASSAULT 2,1,UNCLASSIFIED   30
CONTROLLED SUBSTANCE, POSSESSI   20
PUBLIC ADMINISTRATION,UNCLASSI   16
THEFT OF SERVICES, UNCLASSIFIE   12
ROBBERY,OPEN AREA UNCLASSIFIED   11
LARCENY,GRAND FROM OPEN AREAS, UNATTENDED   10
CONTROLLED SUBSTANCE,INTENT TO   10

pd_desc
LARCENY,PETIT FROM OPEN AREAS,   31
ASSAULT 3   25
LARCENY,GRAND FROM OPEN AREAS, UNATTENDED   14
ASSAULT 2,1,UNCLASSIFIED   12
CONTROLLED SUBSTANCE, POSSESSI   10

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                        OLS Regression Results
==============================================================================
Dep. Variable:           Crime_Count   R-squared:                      0.035
Model:                           OLS   Adj. R-squared:                 0.028
Method:                Least Squares   F-statistic:                    5.285
Date:               Mon, 17 Feb 2025   Prob (F-statistic):           0.00137
Time:                       20:52:08   Log-Likelihood:               -1227.5
No. Observations:                440   AIC:                            2463.
Df Residuals:                    436   BIC:                            2479.
Df Model:                          3
Covariance Type:           nonrobust
==============================================================================
                    coef    std err          t      P>|t|      [0.025      0.975]
------------------------------------------------------------------------------
const             9.3836      0.406     23.099      0.000       8.585      10.182
Attendance     -3.803e-15   2.76e-15     -1.378      0.169    -9.23e-15    1.62e-15
Home/Away_Home    0.8507      0.390      2.180      0.030       0.084       1.618
Win/Loss_Win      1.0926      0.402      2.715      0.007       0.302       1.883
OT_Yes           -1.3779      1.301     -1.059      0.290      -3.936       1.180
==============================================================================
Omnibus:                      39.953   Durbin-Watson:                  0.192
Prob(Omnibus):                 0.000   Jarque-Bera (JB):              50.399
Skew:                          0.718   Prob(JB):                    1.14e-11
Kurtosis:                      3.829   Cond. No.                    9.47e+17
==============================================================================
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AREAS OF FOCUS

IMPLICATIONS FOR STAKEHOLDERS

•Increased crime following major events may require law enforcement to allocate more resources to manage post-game situations, affecting staffing and budgeting priorities.
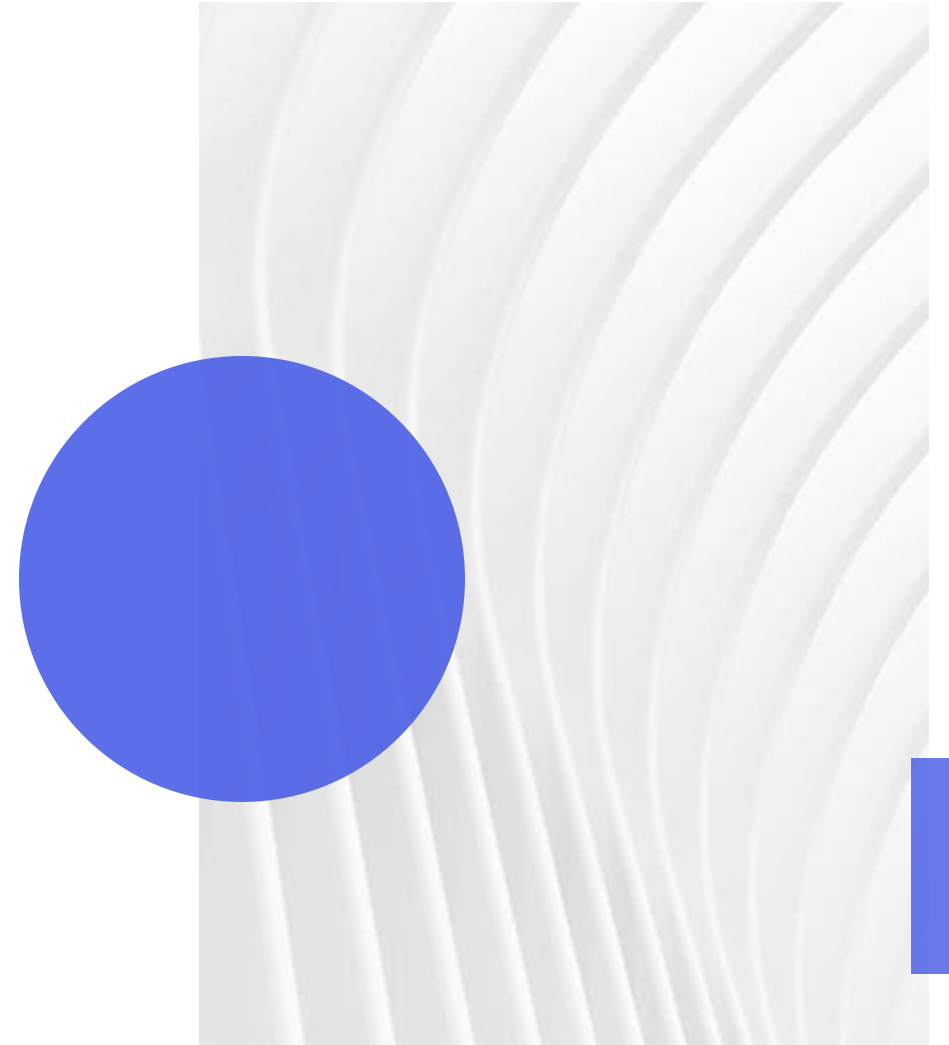
ETHICAL, LEGAL, SOCIETAL IMPLICATIONS

•Analyzing crime data could raise concerns about profiling, biases in data collection, and how it might influence policy decisions or public perceptions of specific communities.
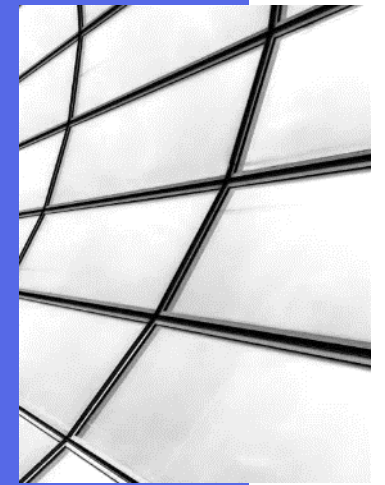
CONCLUSION

- The results of the analysis are inconclusive at this stage, indicating the need for further data retrieval

- This analysis serves as a good start for recommendations on policy updates aimed at mitigating the potential impact of sporting events on crime rates

THANK YOU