

Shadows in the Sun – The guilty secret in a busy city

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A large, dark blue, diagonal shape that starts from the bottom left and extends towards the top right, covering the bottom right portion of the slide.

Background

Background

At the time, an assailant driving a black car pulled up to the Chinese student, who then pulled out a gun and demanded that the Chinese student hand over his belongings. **The assailant then shot the young student in the chest, killing him.**

For his part, the Chinese student's college friend told ABC that the student had not only just graduated from the school, but had only **just received his U.S. driver's license** and had a new partner, and that "a wonderful world was waiting for him, and who knew this would happen."

Another of his friends also said the Chinese student was actually very safety conscious and that **he was the one who had been reminding his friends to install those apps** that can avoid dangerous neighborhoods, but he still didn't escape this fate, "It's so ironic and sad."



Dataset

Dataset

CITY OF CHICAGO · UPDATED 5 YEARS AGO

672 New Notebook

Chicago Crime

Chicago Crime (BigQuery Dataset)



Data Code (557) Discussion (4)

About Dataset

Context

Approximately 10 people are shot on an average day in Chicago.

<http://www.chicagotribune.com/news/data/ct-shooting-victims-map-charts-htmlstory.html>

<http://www.chicagotribune.com/news/local/breaking/ct-chicago-homicides-data-tracker-htmlstory.html>

<http://www.chicagotribune.com/news/local/breaking/ct-homicide-victims-2017-htmlstory.html>

Usability

7.06

License

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Expected update frequency

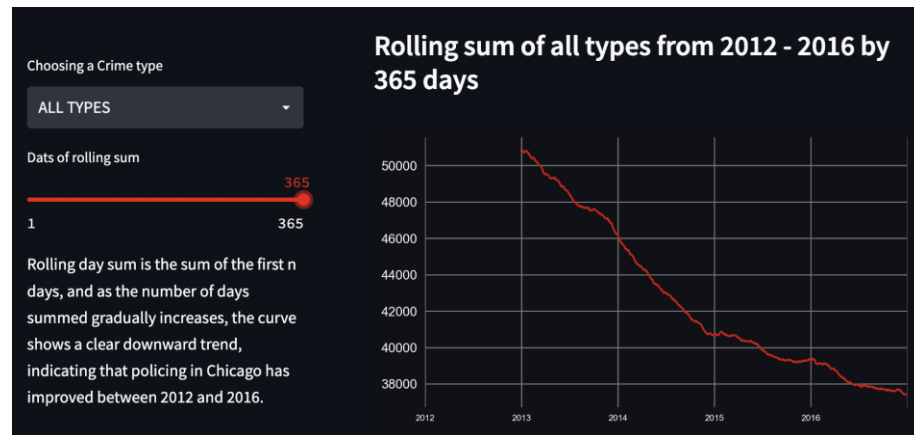
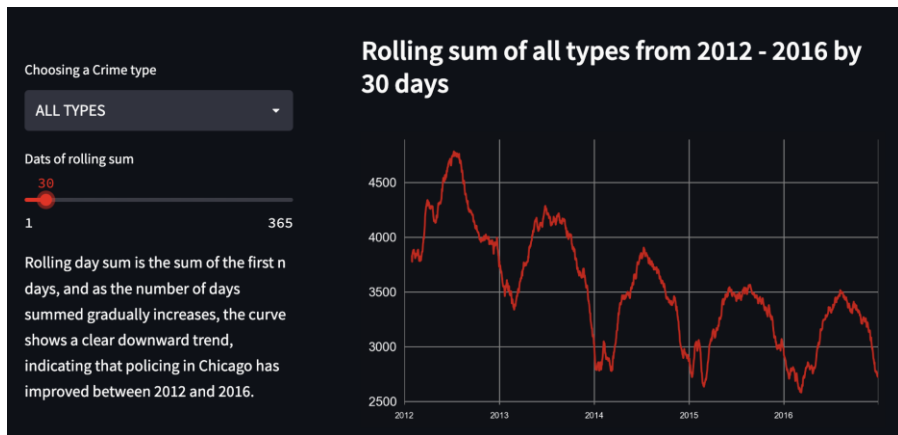
Not specified

crimes.head()																	Python
Date	ID	Date	Block	Primary Type	Description	Location Description	Arrest	Domestic	Beat	District	Ward	Community Area	FBI Code	Year	Latitude	Longitude	
2015-01-19 23:15:00	9932376	2015-01-19 23:15:00	052XX S NORMANDY AVE	THEFT	OVER \$500	STREET	False	False	811	8.0	23.0	56.0	06	2015	41.797130	-87.785	
2015-08-31 13:00:00	9287358	2015-08-31 13:00:00	047XX S ABERDEEN ST	MOTOR VEHICLE THEFT	AUTOMOBILE	STREET	False	False	933	9.0	3.0	61.0	07	2013	41.808535	-87.651	
2014-08-13 16:33:00	9736106	2014-08-13 16:33:00	029XX W IRVING PARK RD	OTHER OFFENSE	HARASSMENT BY TELEPHONE	OTHER	False	False	1733	17.0	33.0	16.0	26	2014	41.953955	-87.702	
2012-09-29 21:45:00	8824448	2012-09-29 21:45:00	007XX E 78TH ST	NARCOTICS	POSS: CANNABIS 30GMS OR LESS	SIDEWALK	True	False	624	6.0	6.0	69.0	18	2012	41.753094	-87.601	
2013-10-16 20:40:00	9362048	2013-10-16 20:40:00	006XX N HOMAN AVE	NARCOTICS	POSS: HEROIN(WHITE)	SIDEWALK	True	False	1121	11.0	27.0	23.0	18	2013	41.892825	-87.711	

Analysis

Rolling sum

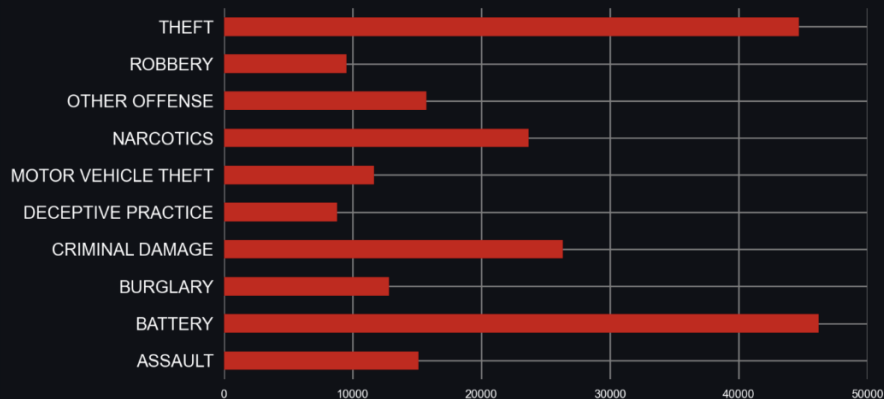
Improvement in Chicago's security



Time slots

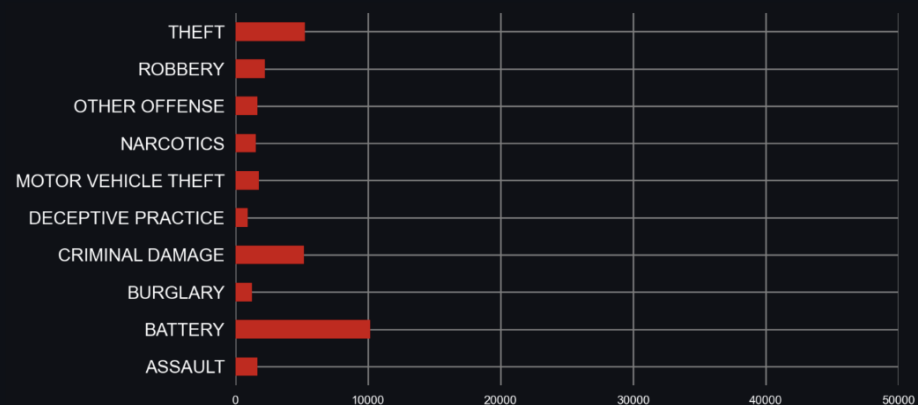
- All Day

Distribution of cases in different time periods



- Only Midnight

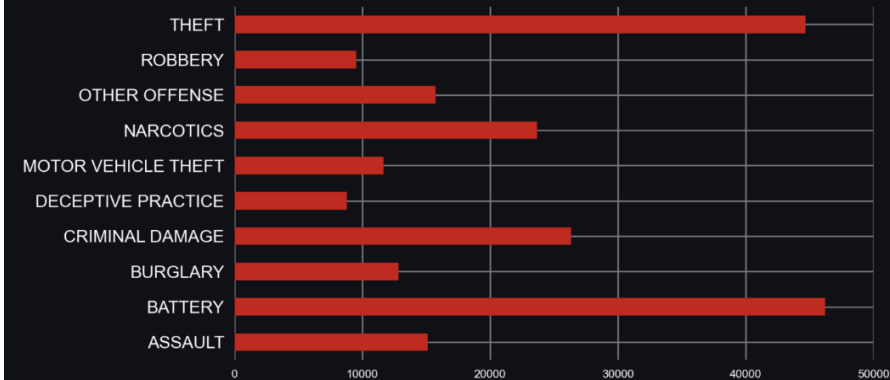
Distribution of cases in different time periods



Narcotics arrested rate

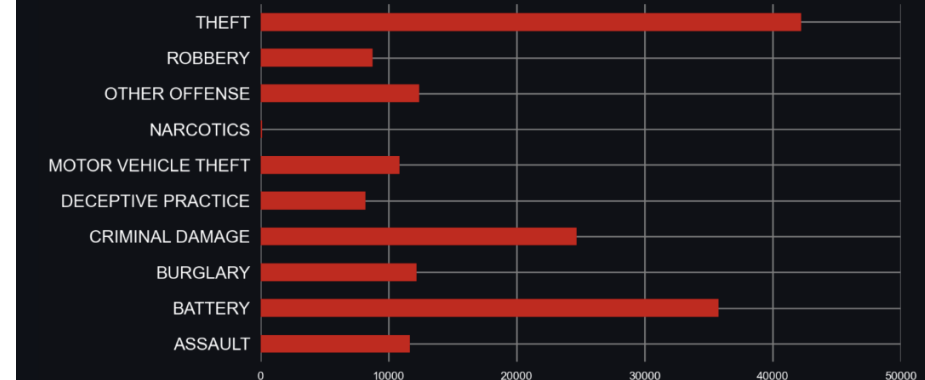
- All Cases

Distribution of cases in different time periods

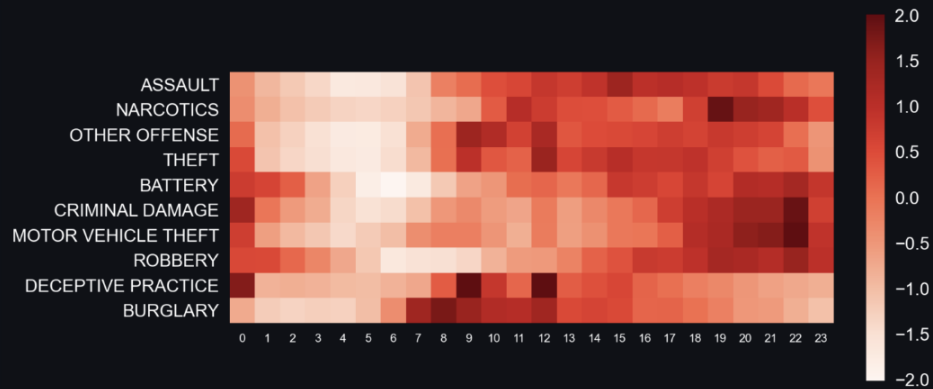


- Only not arrested

Distribution of cases in different time periods



Thermodynamic diagram

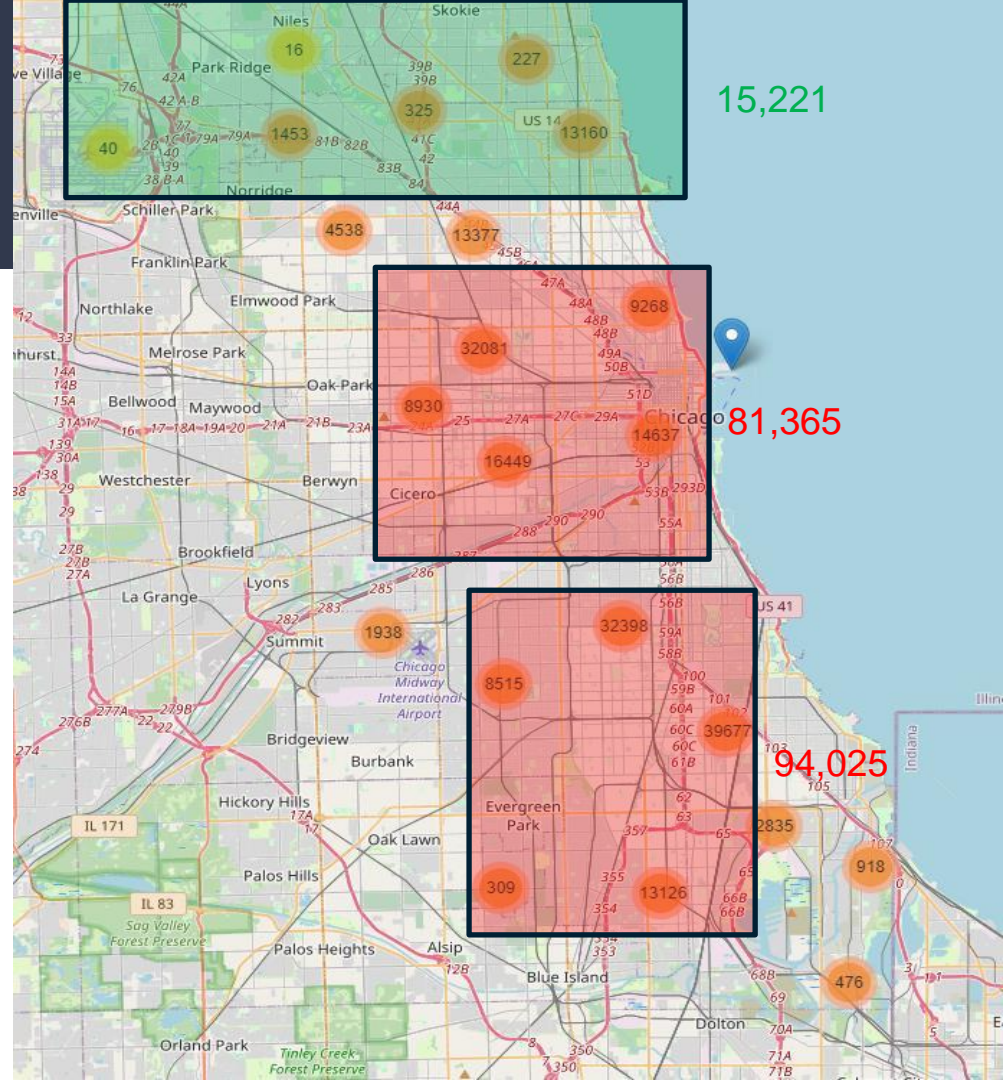


Location

The North Side of Chicago (Green Part) is safer due to its proximity to the wealthy parts of Chicago.

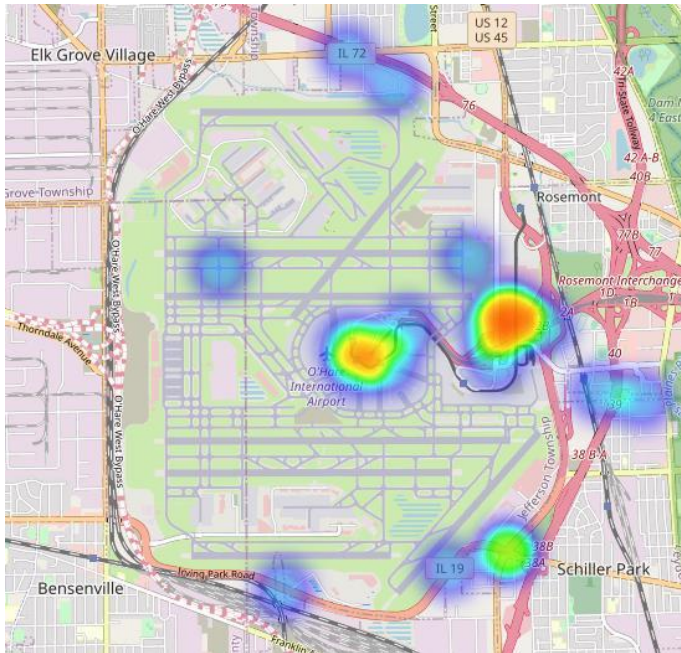
Central Chicago and the South Side of Chicago (Red Part) are less secure

City boundaries' area is also safer.



Closer Look

- Airport

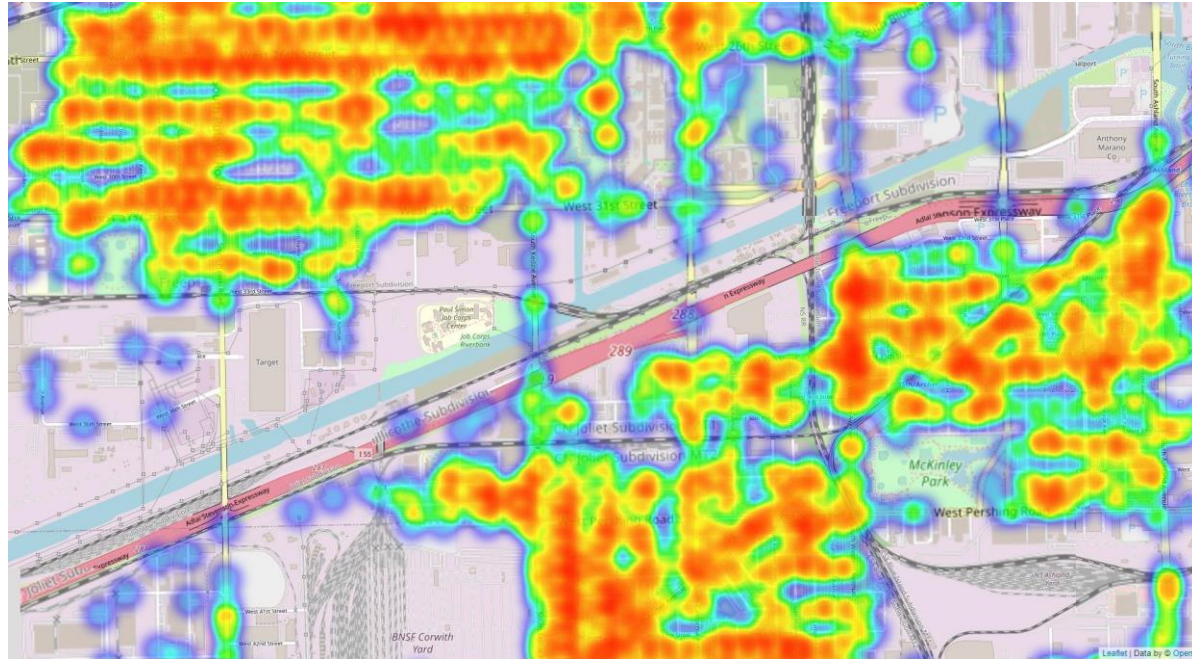


- Campus



Closer Look

- Adlai-Stevenson Expressway (Interstate 55 in Illinois)

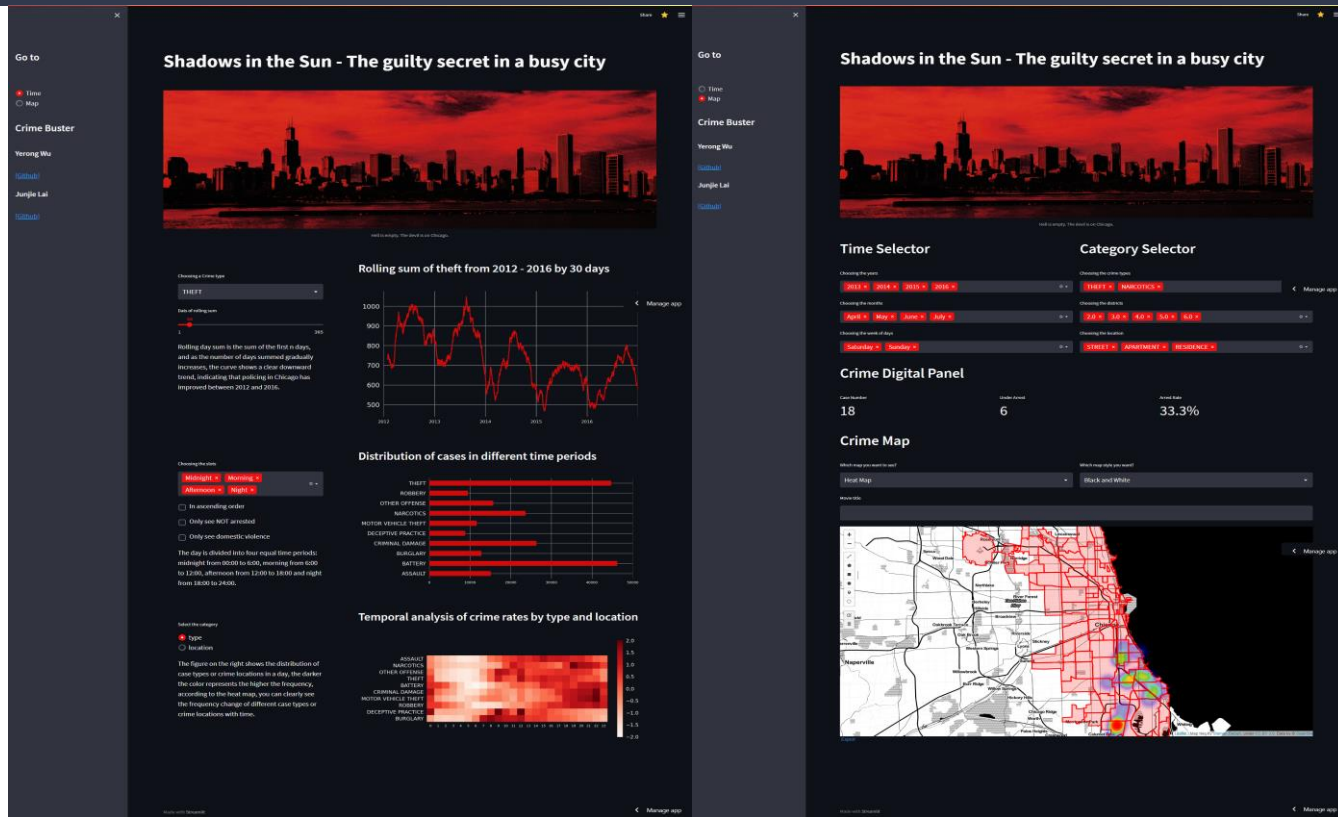


Demo

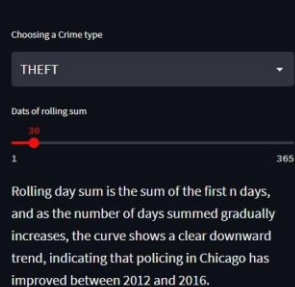
<https://fairy-rong-final-project-app-xm32au.streamlitapp.com/>

Nichols Park, Chicago

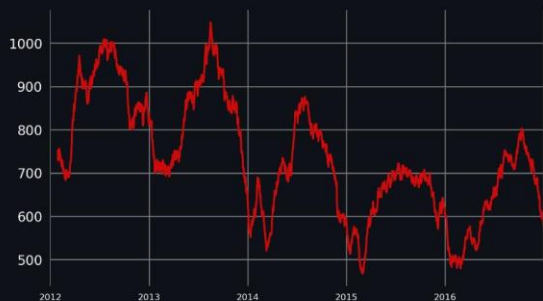
Screenshots



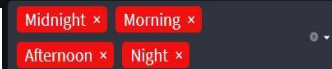
Screenshots



Rolling sum of theft from 2012 - 2016 by 30 days



Choosing the slots



- ☐ In ascending order
- ☐ Only see NOT arrested
- ☐ Only see domestic violence

The day is divided into four equal time periods: midnight from 00:00 to 6:00, morning from 6:00 to 12:00, afternoon from 12:00 to 18:00 and night from 18:00 to 24:00.

Distribution of cases in different time periods



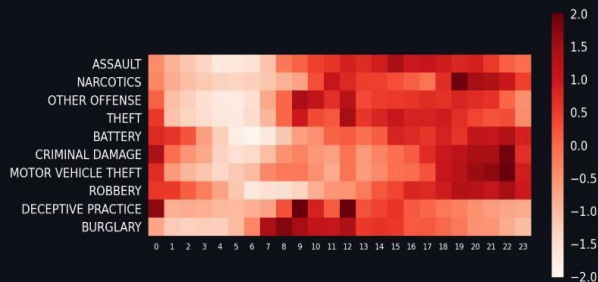
Screenshots

Temporal analysis of crime rates by type and location

Select the category

- ☒ type
☐ location

The figure on the right shows the distribution of case types or crime locations in a day, the darker the color represents the higher the frequency, according to the heat map, you can clearly see the frequency change of different case types or crime locations with time.

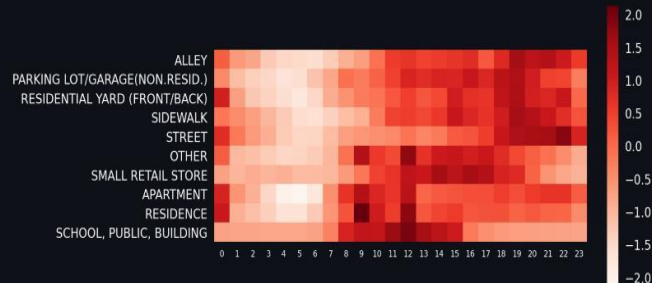


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Screenshots

Time Selector

Choosing the years

2013 × 2014 × 2015 × 2016 ×

Choosing the months

April × May × June × July ×

Choosing the week of days

Saturday × Sunday ×

Category Selector

Choosing the crime types

THEFT × NARCOTICS ×

Choosing the districts

2.0 × 3.0 × 4.0 × 5.0 × 6.0 ×

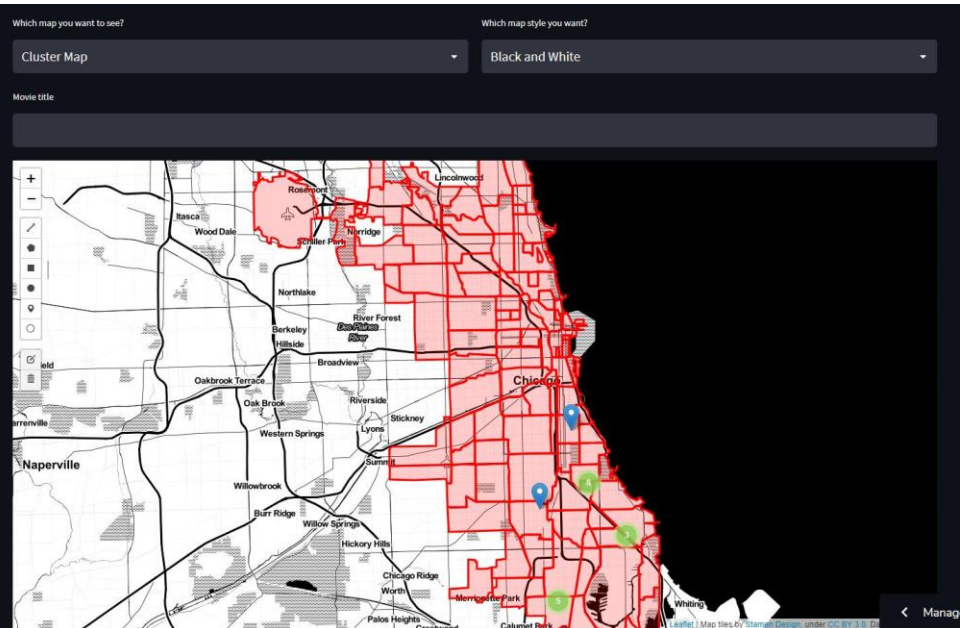
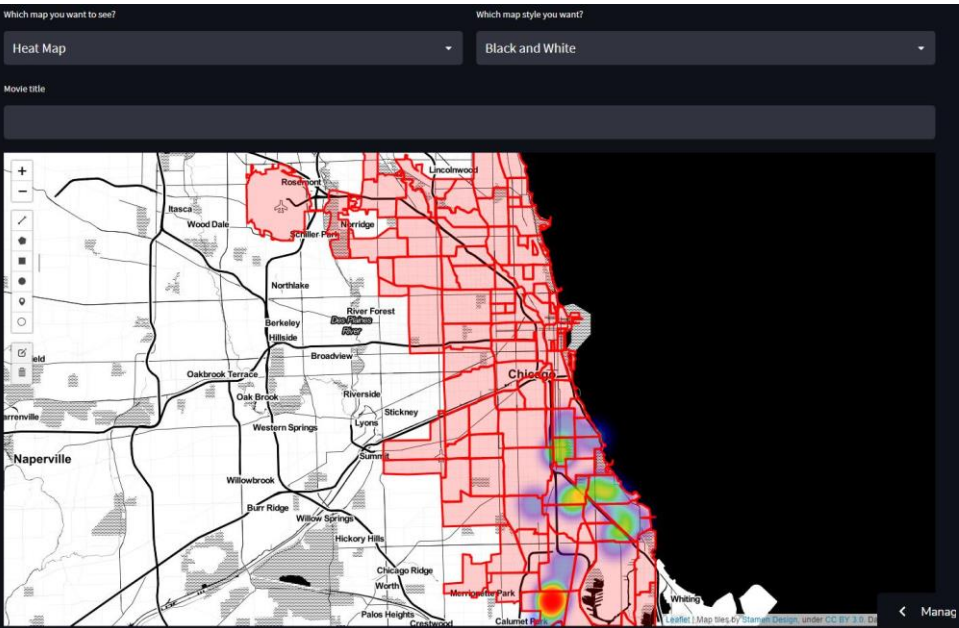
Choosing the location

STREET × APARTMENT × RESIDENCE ×

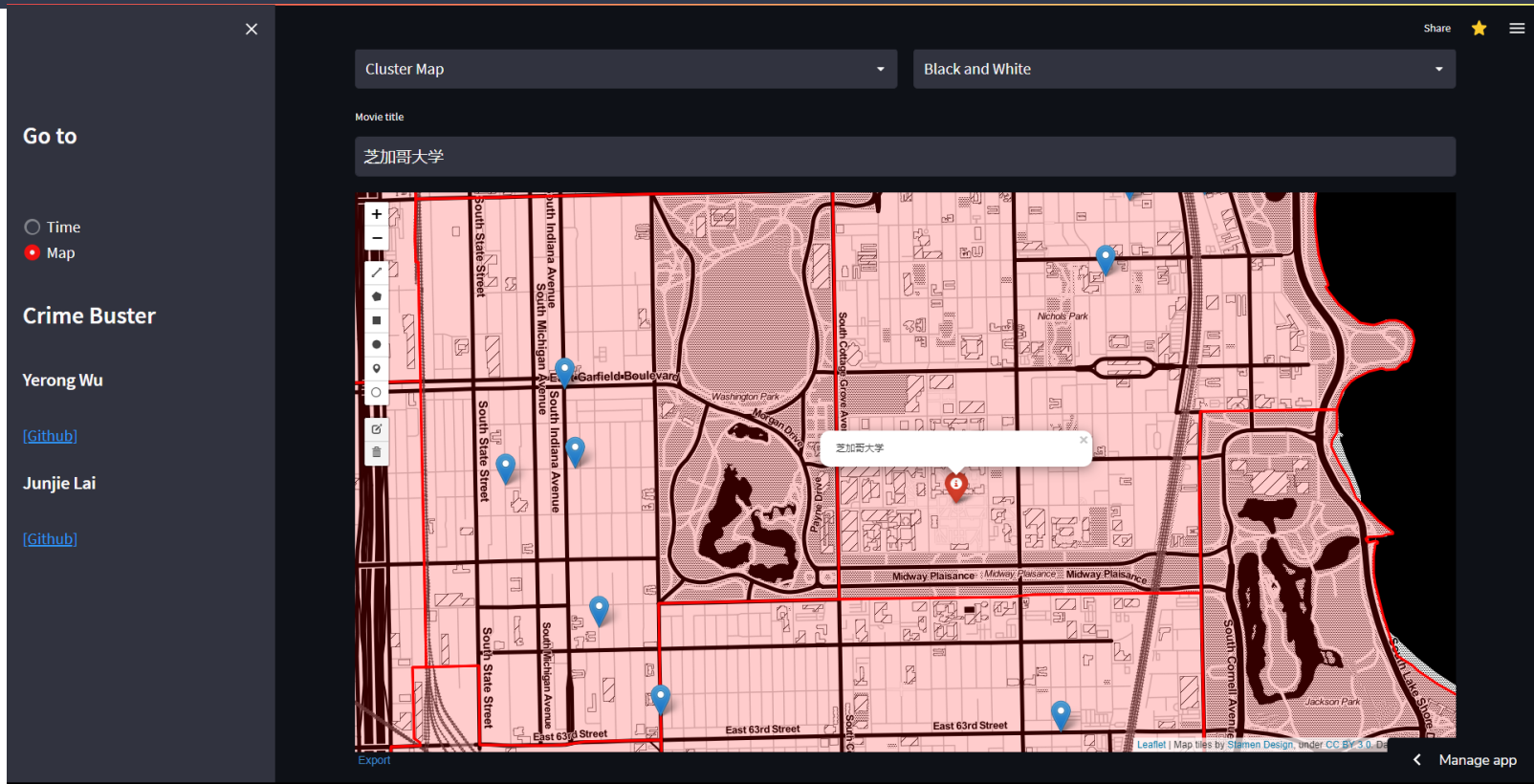
Crime Digital Panel

Case Number	Under Arrest	Arrest Rate
18	6	33.3%

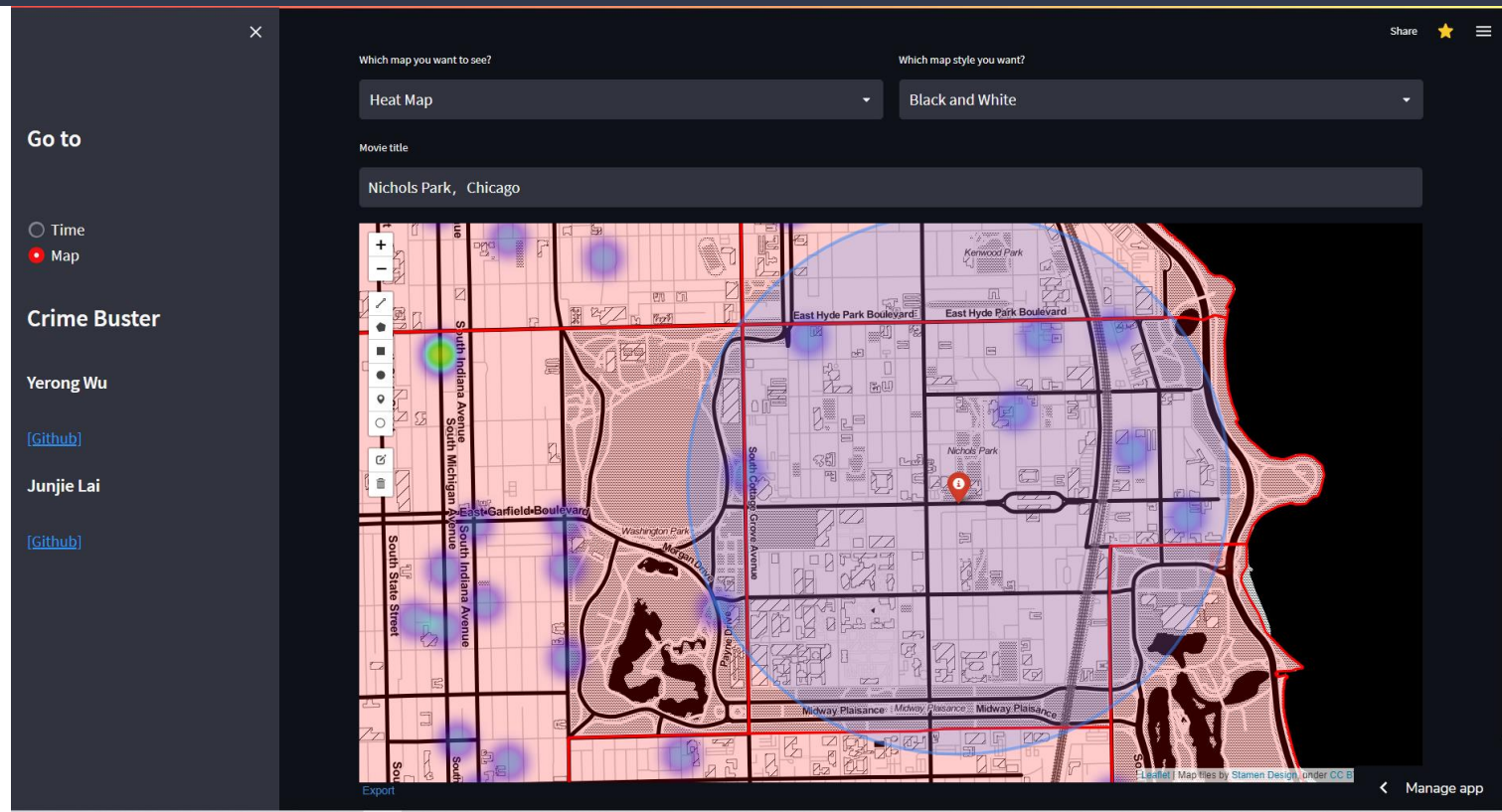
Screenshots



Screenshots



Screenshots



Thank You !