Crimes rate in Chicago
2001-2022

This is a Chicago Crime Data set (Between the years 2001-2022). This dataset reflects reported incidents of crime (with the exception of murders where data exists for each victim) that occured in the City of Chicago from 2001 to present(minus the most recent weeks).The data is extracted from the Chicago Police Department's CLEAR (Citizen Law Enforcement Analysis and Reporting) system.

This Dataset is important to me because I'm searching for a place to live and having a better understanding on the Chicago crime rates can be a useful tool in looking for a place to live and it also gives a view on the security status of this City. Crime statistics can be a useful tool in helping criminal justice professionals anticipate increased risk of crime. It is a reliable source of predicting crime rates. Sharing crime statistics with the public increases trust in police and creates good working relationships.

This dataset is useful to discover and understand the trend in Chicago Crime. My research on this dataset shows that during the early years between 2001-2005 crime rate has been considerably high, with a very low rate of arrest. The amount of Crime reported in recent years has considerably decreased in comparison, which conveys that the security of Chicago has increased during these years.

During the research I explored the relationship between the type of crimes and where they happened.
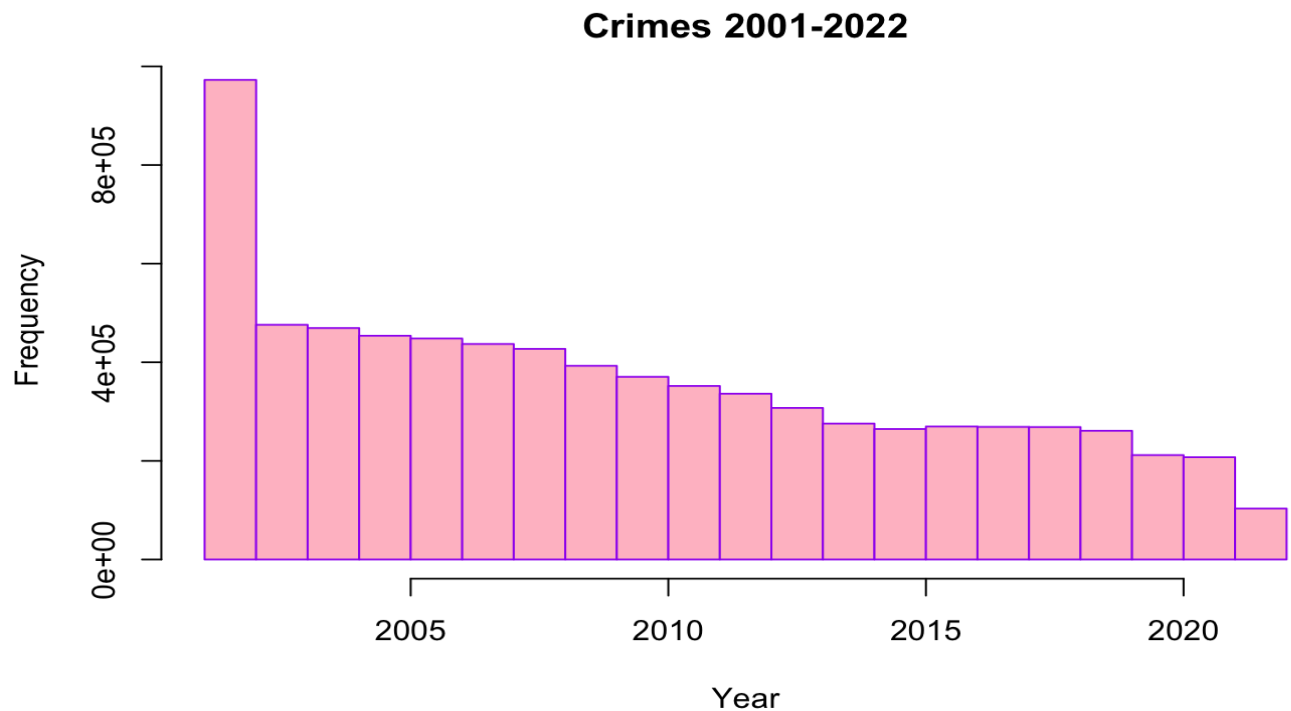
The research revealed that common crimes that were reported were mostly BATTERY, ROBBERY, THEFT, CRIMINAL DAMAGE, ASSAULT. During the early years(2001) BURGLARY, NARCOTICS was a very common reported crime.

Also the research shows that these mostly took place on street, apartment, residence, sidewalk, small retail store.

I also noticed that there was a very steady decline in the number of homicides during the years after 2001-2016, however there is a sharp increase in the number of Homicides in 2016, similarly there is an increase in the number of Theft in the year 2016.

The question is; How has the crime rate of Chicago changed during the years 2001 to 2022?

To answer this question I have made a histogram using Rstudio which shows the decline in the crime rate;

Crimes 2001-2022

In this histogram we can clearly see the trend in the crime rate, decreasing as it reaches

the recent days. Around the years 2015-19 the crime rate of the city was constant and

not changed until 2020. We can clearly see how low the crime rate is in recent years as

compared to the old times.

This histogram was created using the hist() function. The frequency represents the rate.

I also wanted to discover how many robberies were reported that were arrested during

the year 2001 and the current year, to compare how the rate of robbery has changed

2001:

Description: df [61 × 17]

Case.Number	Date	Block	IUCR	Primary.Type	Description
G132764	03/07/2001 08:45:00 PM	024XX E 87 ST	0320	ROBBERY	STRONGARM - NO WEAPON
G041760	01/20/2001 01:00:00 PM	047XX S JUSTINE ST	0320	ROBBERY	STRONGARM - NO WEAPON
G051143	01/24/2001 09:00:00 PM	061XX W MONTROSE AV	0320	ROBBERY	STRONGARM - NO WEAPON
G071579	02/04/2001 08:56:13 AM	076XX S PHILLIPS AV	0320	ROBBERY	STRONGARM - NO WEAPON
G004854	01/03/2001 09:45:00 AM	035XX W DIVERSEY AV	0313	ROBBERY	ARMED: OTHER DANGEROUS WEAPON
G016254	01/08/2001 04:20:00 PM	011XX W MARQUETTE RD	0340	ROBBERY	ATTEMPT: STRONGARM-NO WEAPON
G018355	01/09/2001 03:45:49 PM	038XX W OGDEN AV	031A	ROBBERY	ARMED: HANDGUN
G030107	01/14/2001 09:54:58 PM	090XX S LANGLEY AV	0320	ROBBERY	STRONGARM - NO WEAPON
G200470	04/08/2001 09:00:00 PM	028XX N CLYBOURN AV	0320	ROBBERY	STRONGARM - NO WEAPON
G203118	04/10/2001 04:30:00 AM	042XX W AUGUSTA BL	0330	ROBBERY	AGGRAVATED

1–10 of 61 rows | 2–7 of 17 columns   Previous 1 2 3 4 5 6 7 Next

Description: df [61 × 17]

Location.Description	Arrest	Domestic	Beat	District	Ward	Community.Area	FBI.Code	Year	Zip.Codes
STREET	true	true	412	4	NA	NA	03	2001	NA
STREET	true	true	931	9	NA	NA	03	2001	14924
RESIDENCE	true	true	1624	16	NA	NA	03	2001	22254
RESIDENCE PORCH/HALLWAY	true	true	421	4	NA	NA	03	2001	22538
GAS STATION	true	true	1412	14	NA	NA	03	2001	22535
STREET	true	true	724	7	NA	NA	03	2001	22257
SIDEWALK	true	true	1014	10	NA	NA	03	2001	21569
VEHICLE NON-COMMERCIAL	true	true	633	6	NA	NA	03	2001	21546
RESIDENCE	true	true	1913	19	NA	NA	03	2001	21538
RESIDENCE	true	true	1111	11	NA	NA	03	2001	4299

1–10 of 61 rows | 8–17 of 17 columns   Previous 1 2 3 4 5 6 7 Next

2022:

Description: df [3 × 17]

ID	Case.Number	Date	Block	IUCR	Primary.Type	Description
12634627	JF164669	03/05/2022 10:30:00 PM	028XX N SHEFFIELD AVE	0320	ROBBERY	STRONG ARM - NO WEAPON
12687618	JF228193	05/02/2022 11:24:00 PM	055XX W GLADYS AVE	031A	ROBBERY	ARMED - HANDGUN
12709125	JF254536	05/24/2022 10:05:00 PM	036XX W CONGRESS PKWY	031A	ROBBERY	ARMED - HANDGUN

3 rows | 1–7 of 17 columns

Description: df [3 × 17]

Location.Description	Arrest	Domestic	Beat	District	Ward	Community.Area	FBI.Code	Year
STREET	true	true	1933	19	44	6	03	2022
APARTMENT	true	true	1522	15	29	25	03	2022
PARKING LOT / GARAGE (NON RESIDENTIAL)	true	true	1133	11	28	27	03	2022

3 rows | 8–16 of 17 columns

First I installed the tidyverse library because I had to tidy up the data. Then I cleaned the dataset using the select((-c)) function to remove the unnecessary columns so that I can only see columns that I'm interested in. Then I filtered out this information using the filter() function in Rstudio. It shows how many robberies that were reported were domestic and were arrested. We can clearly see that the current position of the city is way more secure than the past as there are much more crimes reported in 2001. But the good thing is that arrests were made in either of the times!

Results: So the summary of the exciting discovery I made is that the city of Chicago is now not a dangerous city to live in as the security has been incredibly active in recent days and I'm looking forward to Chicago becoming the safest city to live in the coming years.

Conclusion; there is a lot more to discover besides just the rate of Chicago crime and also just the type and places they occurred in. This analysis inspired me to discover more about the details of the crimes of Chicago. I want to know the crimes such as theft are made up of what percent of the crimes in Chicago. Also I mostly focused on the crimes of 2001 and 2022, I want to go in more detail in what happened between those years and what made the crime rate change so drastically.

P.S: I recently moved to the US about 3 months ago, English is not my language so dont judge my grammar, thank you😊.

Link for the dataset:

https://data.cityofchicago.org/Public-Safety/Crimes-2001-to-present-Dashboard/5cd6-ry5g

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