



ANALYSIS OF CRIME PATTERNS AND ARREST RATES IN CHICAGO

(Using MySQL)

OBJECTIVE: Examining crime patterns and arrest rates across various communities in Chicago to identify trends and disparities.

Lets start by getting an idea about the number of communities and crimes in Chicago

Query 1:

```
SELECT  
COUNT(DISTINCT(COMMUNITY_AREA_NUMBER))  
AS 'Number of Communities' FROM CENSUS;
```

Communities	
▶	77

Query 2:

```
SELECT COUNT(ID) AS 'Total Crimes'  
FROM CRIME;
```

Total Crimes	
▶	353

Insights : Our analysis is based on data from 77 communities in Chicago, providing insights into reported crimes across these areas.

Insights : This output encompasses the total number of crimes committed in Chicago's 77 communities from 2001 to 2018.

Firstly, lets look at the number of crimes committed on a yearly basis in Chicago during the period 2001 to 2018

Query 3:

```
SELECT YEAR(DATE) AS 'Years', COUNT(*) AS 'Number of Crimes'  
FROM CRIME GROUP BY 'Years' ORDER BY 'Years';
```

Insights: This output illustrates the distribution of crimes over the years.

- Between 2002 to 2009, the number of crimes steadily increased, averaging between 20 and 35 incidents, peaking in 2009 with 35 crimes, which accounts for 9.91% of the total reported crimes from 2001 to 2018.
- Following this peak, there was a slight decline in crime rates, with most years falling within the average range of 10 to 25 incidents, continuing through to 2018.

Years	Number of Crimes
2001	1
2002	20
2003	28
2004	22
2005	29
2006	22
2007	31
2008	11
2009	35
2010	18
2011	18
2012	25
2013	13
2014	21
2015	20
2016	19
2017	18
2018	2

Let's examine how the total number of crimes committed is distributed across various crime categories.

Query 4:

```
SELECT PRIMARY_TYPE, COUNT(PRIMARY_TYPE)
AS 'Number of Crimes'
FROM CRIME GROUP BY PRIMARY_TYPE
ORDER BY 'Number of Crimes' DESC;
```

Insights :

- The data shows that THEFT is the most prevalent crime in Chicago, accounting for 28% of all reported incidents.
- This is followed by CRIMINAL DAMAGE at 15% and NARCOTICS offenses at 14%.
- Together, these three categories represent 57% of the total crimes committed.

PRIMARY_TYPE	Number of Crimes
THEFT	100
CRIMINAL DAMAGE	55
NARCOTICS	51
OTHER OFFENSE	29
BURGLARY	27
MOTOR VEHICLE THEFT	22
DECEPTIVE PRACTICE	14
CRIMINAL TRESPASS	13
ROBBERY	9
OFFENSE INVOLVING CHILDREN	4
PROSTITUTION	3
PUBLIC PEACE VIOLATION	3
SEX OFFENSE	3
CRIM SEXUAL ASSAULT	2
INTERFERENCE WITH PUBLIC ...	2
GAMBLING	2
LIQUOR LAW VIOLATION	2
ARSON	2
KIDNAPPING	1
INTIMIDATION	1
OBSCENITY	1
CONCEALED CARRY LICENSE V...	1
PUBLIC INDECENCY	1
NON-CRIMINAL	1
OTHER NARCOTIC VIOLATION	1
HUMAN TRAFFICKING	1
NON - CRIMINAL	1
NON-CRIMINAL (SUBJECT SPE...	1

Now, let's examine the yearly trends in crime counts for different crime types

Query 5:

```
SELECT YEAR(DATE) AS 'Years', PRIMARY_TYPE,  
COUNT(ID) AS 'Number of Crimes' FROM CRIME  
GROUP BY 'Years', PRIMARY_TYPE ORDER BY 'Years',  
'Number of Crimes' DESC;
```

Insights :

- In each year, crimes related to THEFT, CRIMINAL DAMAGE, and NARCOTICS consistently appear at higher rates compared to other offenses.
- 2009 recorded the highest number of THEFTs, alongside significant occurrences of CRIMINAL DAMAGE, NARCOTICS, and BURGLARY.
- The highlighted output shows data from 2008 and 2009 to illustrate the sharp increase in crimes related to THEFT and NARCOTICS in 2009 compared to the preceding year.

Years	PRIMARY_TYPE	Number of Crimes
2008	THEFT	3
2008	NARCOTICS	2
2008	OTHER OFFENSE	2
2008	CRIMINAL DAMAGE	1
2008	BURGLARY	1
2008	MOTOR VEHICLE THEFT	1
2008	GAMBLING	1
2009	THEFT	9
2009	CRIMINAL DAMAGE	5
2009	NARCOTICS	5
2009	BURGLARY	5
2009	OTHER OFFENSE	3
2009	CRIMINAL TRESPASS	2
2009	MOTOR VEHICLE THEFT	1
2009	DECEPTIVE PRACTICE	1
2009	ROBBERY	1
2009	OFFENSE INVOLVING C...	1
2009	SEX OFFENSE	1
2009	GAMBLING	1

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Lets look at the number of crimes reported across the communities

Query 6:

```
SELECT CS.COMMUNITY_AREA_NAME, COUNT(CR.ID) AS 'Number of Recorded Crimes Per Area' FROM CENSUS AS CS JOIN CRIME AS CR ON CS.COMMUNITY_AREA_NUMBER = CR.COMMUNITY_AREA_NUMBER GROUP BY CS.COMMUNITY_AREA_NAME ORDER BY 'Number of Recorded Crimes Per Area' DESC;
```

- Insights :**
- The output shows the top 15 communities ranked by the number of reported crimes.
 - Austin has the highest crime rate, accounting for 7% of all crimes, followed by Humboldt at 3.9%, Englewood at 3.68%, and both Near West Side and Near North Side at approximately 3.4% each.
 - Together, these top 5 communities contribute to 21.8% of the total crimes committed in Chicago.
 - When a small number of communities (5 out of 77, which is about 6.5%) account for nearly 22% of all crimes, it indicates a high concentration of criminal activity in these areas. This suggests that these communities face disproportionate levels of crime compared to the rest.

COMMUNITY_AREA_NAME	Number of Recorded Crimes Per Area
Austin	26
Humboldt park	14
Englewood	13
Near West Side	12
Near North Side	12
West Town	11
Chicago Lawn	10
West Englewood	9
Brighton Park	9
Greater Grand Crossing	9
Auburn Gresham	9
Logan Square	8
North Lawndale	8
Lower West Side	7
West Garfield Park	7

Let's examine how crime has evolved across communities over the years to better understand the yearly trend in these disproportionalities

Query 7:

```
SELECT YEAR(CR.DATE) AS 'Years', CS.COMMUNITY_AREA_NAME,  
COUNT(CR.ID) AS 'Number of Crimes' FROM CENSUS AS CS JOIN CRIME  
AS CR ON CS.COMMUNITY_AREA_NUMBER =  
CR.COMMUNITY_AREA_NUMBER GROUP BY  
CS.COMMUNITY_AREA_NAME, 'Years' ORDER BY 'Years', 'Number of  
Crimes' DESC;
```

- Insights:**
- When examining the yearly occurrence of crimes in each community, we find that most report only 1 to 2 crimes per year, with a few exceptions.
 - Even among the top 5 communities, crime rates are relatively evenly distributed.
 - However, Austin stands out with consistently higher crime rates compared to the other areas throughout most of the years.
 - This output, focuses on 2009 and 2013, as these years show notable differences in Austin's crime rates, with 4 crimes reported in 2009 and 3 crimes in 2013.

Years	COMMUNITY_AREA_NAME	Number of Crimes
2009	Austin	4
2009	Lower West Side	3
2009	Calumet Heights	2
2009	Englewood	2
2009	Albany Park	2
2009	Chicago Lawn	2
2009	Humboldt park	2
2009	North Lawndale	2
2009	Chatham	1
2009	Lake View	1
2009	West Lawn	1
2009	West Englewood	1
2009	Gage Park	1
2009	West Elsdon	1
2009	West Town	1
2009	South Chicago	1
2009	Greater Grand Crossing	1
2009	East Side	1
2009	Dunning	1
2013	Austin	3
2013	North Lawndale	2
2013	Chicago Lawn	1
2013	West Garfield Park	1
2013	Greater Grand Crossing	1
2013	Near West Side	1
2013	Belmont Cragin	1
2013	West Town	1
2013	Englewood	1
2013	Loop	1

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Let's delve into the overall distribution of crime types across all communities to uncover any underlying patterns that may explain the observed disproportionalities.

Query 8:

```
SELECT CS.COMMUNITY_AREA_NAME, CPT.PRIMARY_TYPE, COUNT(CR.ID) AS  
'Number of Crimes' FROM CENSUS AS CS CROSS JOIN (SELECT DISTINCT  
PRIMARY_TYPE FROM CRIME) AS CPT LEFT JOIN CRIME AS CR ON  
CS.COMMUNITY_AREA_NUMBER = CR.COMMUNITY_AREA_NUMBER AND  
CR.PRIMARY_TYPE = CPT.PRIMARY_TYPE GROUP BY  
CS.COMMUNITY_AREA_NAME, CPT.PRIMARY_TYPE HAVING 'Number of Crimes'  
> 0 ORDER BY CS.COMMUNITY_AREA_NAME, 'Number of Crimes' DESC;
```

Insights:

- THEFT and NARCOTICS offenses are more prevalent in most areas compared to other types of crimes and are also reported in a wider range of communities.
- This pattern is also evident in our top 5 communities, including Austin, where THEFT and NARCOTICS related crimes stand out significantly.
- Specifically, Austin reported 8 THEFTS and 7 NARCOTICS cases, highlighting the prominence of these crime types in Austin.
- For this query, the output shows a few of the initial communities in alphabetical order, along with Austin, which consistently reports higher crime rates compared to other areas.

COMMUNITY_AREA_NAME	PRIMARY_TYPE	Number of Crimes
Albany Park	THEFT	3
Albany Park	OTHER OFFENSE	1
Albany Park	ROBBERY	1
Ashburn	CRIMINAL DAMAGE	2
Ashburn	OBSCENITY	1
Ashburn	NARCOTICS	1
Ashburn	OFFENSE INVOLVING CHILDREN	1
Ashburn	DECEPTIVE PRACTICE	1
Ashburn	CRIMINAL TRESPASS	1
Auburn Gresham	DECEPTIVE PRACTICE	2
Auburn Gresham	NARCOTICS	1
Auburn Gresham	THEFT	1
Auburn Gresham	PUBLIC INDECENCY	1
Auburn Gresham	BURGLARY	1
Auburn Gresham	CRIMINAL DAMAGE	1
Auburn Gresham	MOTOR VEHICLE THEFT	1
Auburn Gresham	CRIMINAL TRESPASS	1
Austin	THEFT	8
Austin	NARCOTICS	7
Austin	BURGLARY	3
Austin	OTHER OFFENSE	2
Austin	CRIMINAL DAMAGE	2
Austin	CONCEALED CARRY LICENSE V...	1
Austin	KIDNAPPING	1
Austin	MOTOR VEHICLE THEFT	1
Austin	PROSTITUTION	1

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Let's now explore where different crime types occur prominently across communities to identify crime hotspots

Query 9:

```
SELECT CR.PRIMARY_TYPE, CS.COMMUNITY_AREA_NAME, COUNT(CR.ID) AS 'Number of Crimes', SUM(COUNT(CR.ID)) OVER(PARTITION BY CR.PRIMARY_TYPE) AS 'Total Crimes by Type' FROM CRIME AS CR JOIN CENSUS AS CS ON CR.COMMUNITY_AREA_NUMBER = CS.COMMUNITY_AREA_NUMBER GROUP BY CR.PRIMARY_TYPE, CS.COMMUNITY_AREA_NAME HAVING COUNT(CR.ID) > 0 ORDER BY 'Total Crimes by Type' DESC, 'Number of Crimes' DESC;
```

Insights :

The output highlights the top 5 communities contributing to the most frequent crimes - THEFT, CRIMINAL DAMAGE, and NARCOTICS.

- THEFT is notably common in Austin, Near West Side, and Englewood, comprising 18% of all thefts, with Austin alone accounting for 8 incidents.
- CRIMINAL DAMAGE is concentrated in West Town and Brighton Park, together representing 13% of these crimes.
- NARCOTICS offenses are prominent in Austin, Humboldt Park, and Uptown, collectively making up 30% of such cases.

PRIMARY_TYPE	COMMUNITY_AREA_NAME	Number of Crimes
THEFT	Austin	8
THEFT	Near West Side	5
THEFT	Englewood	5
THEFT	Humboldt park	4
THEFT	Loop	4
CRIMINAL DAMAGE	West Elsdon	1
CRIMINAL DAMAGE	North Center	1
CRIMINAL DAMAGE	Montclare	1
CRIMINAL DAMAGE	Dunning	1
CRIMINAL DAMAGE	Burnside	1
NARCOTICS	Austin	7
NARCOTICS	Humboldt park	5
NARCOTICS	Uptown	4
NARCOTICS	Brighton Park	3
NARCOTICS	Near West Side	3

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After exploring the distribution of crime across communities, we will now shift our focus to examining arrest patterns within these areas, starting with the total number of arrests made.

Query 10:

```
SELECT COUNT(ARREST) AS 'Total Arrests'  
FROM CRIME WHERE ARREST = "TRUE";
```

Insights:

- The output displays the total number of arrests made across the 77 communities in Chicago from 2001 to 2018.
- During this period, arrests accounted for approximately 30.59% of all reported crimes across these communities.

Total Arrests
108

Next, we explore the relationship between crime reports and arrest numbers over time, highlighting changes in arrest trends across different years.

Query 11:

```
WITH year_arrest AS (SELECT YEAR(DATE) AS 'Years', COUNT(ID)
AS 'Number of Crimes', SUM(CASE WHEN ARREST = "TRUE" THEN 1
ELSE 0 END) AS 'Number of Arrests' FROM CRIME GROUP BY
'Years' ORDER BY 'Years', 'Number of Arrests' DESC)

SELECT year_arrest.'Years', 'Number of Crimes', 'Number of Arrests',
ROUND('Number of Arrests' / 'Number of Crimes') * 100 ,2) AS '% of
Arrests` FROM year_arrest ORDER BY 'Years', '% of Arrests' DESC;
```

Years	Number of Crimes	Number of Arrests	Rate of Arrests
2001	1	1	100.00
2002	20	6	30.00
2003	28	8	28.57
2004	22	9	40.91
2005	29	13	44.83
2006	22	7	31.82
2007	31	13	41.94
2008	11	3	27.27
2009	35	12	34.29
2010	18	2	11.11
2011	18	3	16.67
2012	25	9	36.00
2013	13	5	38.46
2014	21	5	23.81
2015	20	5	25.00
2016	19	1	5.26
2017	18	4	22.22
2018	2	2	100.00

Insights:

- We observe a slight increase in the number of arrests and arrest rate corresponding with the rise in crime reports up to 2009
- However, after 2009, the number of arrests begins to decline relative to the number of crimes committed, with a noticeable drop in the arrest rate between 2010–2018, as compared to the arrest rate between 2001– 2009.
- This downward trend continues through to 2018.

Next, we look at how arrests compare to crimes in different communities between the years 2001-2018

Query 12:

```
SELECT YEAR(CR.DATE) AS 'Years', CS.COMMUNITY_AREA_NAME,
COUNT(CR.ID) AS 'Number of Crimes', SUM(CASE WHEN
CR.ARREST = 'TRUE' THEN 1 ELSE 0 END) AS 'Number of Arrests'
FROM CENSUS AS CS JOIN CRIME AS CR ON
CS.COMMUNITY_AREA_NUMBER = CR.COMMUNITY_AREA_NUMBER
GROUP BY 'Years', CS.COMMUNITY_AREA_NAME ORDER BY 'Years',
'Number of Crimes' DESC;
```

Insights:

- Generally, the number of arrests per year in each community is much lower than the number of crimes committed, with many years showing zero arrests even when 1-2 crimes were recorded.
- For instance, in the displayed output, during 2002 only Lakeview and Douglas reported arrests, while other communities with recorded crimes had none.
- This trend could be influenced by the slow pace of the justice system, where processing and assessing crimes often takes more than a year, delaying arrests.

Years	COMMUNITY_AREA_NAME	Number of Crimes	Number of Arrests
2001	Chicago Lawn	1	1
2002	West Garfield Park	3	2
2002	Austin	2	2
2002	O'Hare	1	0
2002	Near West Side	1	0
2002	South Deering	1	0
2002	Lower West Side	1	0
2002	Auburn Gresham	1	0
2002	West Ridge	1	0
2002	Near North Side	1	0
2002	Hyde Park	1	0
2002	Greater Grand Crossing	1	0
2002	Gage Park	1	0
2002	Belmont Cragin	1	0
2002	Brighton Park	1	0
2002	Lake View	1	1
2002	Douglas	1	1
2002	Englewood	1	0

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Next, we focus on communities with higher arrest rates to see how these rates compare to their crime counts.

Query 13:

```
CREATE VIEW comm_crime AS (SELECT CS.COMMUNITY_AREA_NAME,
COUNT(CR.ID) AS 'Number of Crimes', SUM(CASE WHEN CR.ARREST = 'TRUE'
THEN 1 ELSE 0 END) AS 'Number of Arrests' FROM CENSUS AS CS JOIN
CRIME AS CR ON CS.COMMUNITY_AREA_NUMBER =
CR.COMMUNITY_AREA_NUMBER GROUP BY CS.COMMUNITY_AREA_NAME
ORDER BY 'Number of Crimes' DESC);

SELECT COMMUNITY_AREA_NAME, 'Number of Crimes', 'Number of Arrests',
ROUND((`Number of Arrests` / `Number of Crimes`),2)* 100 AS 'Percentage of
Arrests' FROM comm_crime
ORDER BY 'Percentage of Arrests' DESC;
```

Insights:

To enhance readability, the output focuses on communities with an arrest rate of 50% or higher.

- The communities that can be seen with a high rate of arrest also have crimes below 5.
- This trend is evident in areas like East Garfield Park, Uptown, Hegewisch, and other locations with low crime numbers.
- Notably, Hegewisch recorded only one crime, which resulted in an arrest, making it the community with the lowest crime count and a 100% arrest rate.

COMMUNITY_AREA_NAME	Number of Crimes	Number of Arrests	Rate of Arrests
East Garfield Park	3	3	100.00
Uptown	4	4	100.00
Hegewisch	1	1	100.00
Douglas	4	3	75.00
Lincoln Park	3	2	67.00
West Lawn	3	2	67.00
Ashburn	7	4	57.00
Montclare	2	1	50.00
Near North Side	12	6	50.00
Grand Boulevard	4	2	50.00
Chicago Lawn	10	5	50.00
McKinley Park	2	1	50.00
Garfield Ridge	2	1	50.00
Rogers Park	6	3	50.00
North Lawndale	8	4	50.00
Woodlawn	6	3	50.00

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Now, we examine communities with higher crime counts in comparison with their arrest rates

Query 14:

```
SELECT COMMUNITY_AREA_NAME, 'Number of Crimes', 'Number of Arrests', ROUND((`Number of Arrests`/ `Number of Crimes`),2)* 100 AS 'Percentage of Arrests' FROM comm_crime ORDER BY 'Number of Crimes' DESC;
```

Insights:

For readability, the output displays only those communities having more than 5 crimes.

- In communities with more than 10 crimes, arrest rates are generally low.
- Near North Side is the exception, standing out as the only community with an arrest rate as high as 50%.
- In contrast, other communities with similar crime levels, such as Austin, Humboldt Park, Englewood, and Near West Side, have much lower arrest rates.

COMMUNITY_AREA_NAME	Number of Crimes	Number of Arrests	Rate of Arrests
Austin	26	11	42.00
Humboldt park	14	6	43.00
Englewood	13	2	15.00
Near West Side	12	3	25.00
Near North Side	12	6	50.00
West Town	11	2	18.00
Chicago Lawn	10	5	50.00
West Englewood	9	1	11.00
Brighton Park	9	3	33.00
Greater Grand Crossing	9	2	22.00
Auburn Gresham	9	3	33.00
Logan Square	8	1	13.00
North Lawndale	8	4	50.00
Lower West Side	7	2	29.00
West Garfield Park	7	3	43.00
New City	7	3	43.00
Ashburn	7	4	57.00
Lake View	7	2	29.00
South Chicago	6	1	17.00

Why are arrest rates in Austin, Humboldt Park, Englewood, and Near West Side so low despite having high crime?

- From a previous analysis, we observed that these specific communities also had a higher concentration of THEFT and NARCOTICS related crimes as compared to other communities.

PRIMARY_TYPE	COMMUNITY_AREA_NAME	Number of Crimes
THEFT	Austin	8
THEFT	Near West Side	5
THEFT	Englewood	5
THEFT	Loop	4
THEFT	Humboldt park	4

PRIMARY_TYPE	COMMUNITY_AREA_NAME	Number of Crimes
NARCOTICS	Austin	7
NARCOTICS	Humboldt park	5
NARCOTICS	Uptown	4
NARCOTICS	Brighton Park	3
NARCOTICS	North Lawndale	3

As we can see here, the top 5 communities where THEFT related crimes as highest include all 4 of these communities.

The top 5 communities where NARCOTICS related crimes are highest include all these communities too, except Englewood.

To further explore this connection, we will now examine numbers of arrests made for specific crime types, including theft and narcotics.

Query 15:

```
CREATE VIEW crime_percent AS(SELECT PRIMARY_TYPE,  
COUNT(PRIMARY_TYPE) AS 'Number of Crimes', SUM(CASE  
WHEN ARREST = 'TRUE' THEN 1 ELSE 0 END) AS 'Number of  
Arrests' FROM CRIME GROUP BY PRIMARY_TYPE ORDER BY  
'Number of Crimes' DESC);  
  
SELECT PRIMARY_TYPE, 'Number of Crimes', 'Number of  
Arrests', ROUND((`Number of Arrests` / `Number of Crimes`) *  
100, 2) AS 'Rate of Arrests' FROM crime_percent ORDER BY  
'Number of Arrests' DESC;
```

Insights: The output shows crime types with more than 1 arrests, ordered by the number of arrests made.

- We observe that 98% of NARCOTICS-related crimes result in arrests, indicating that the presence of NARCOTICS related crimes does not lower a community's arrest rate.
- Among crime types with more than 10 reports, only NARCOTICS and CRIMINAL TRESPASS have notable arrest rates, both exceeding 70%.

PRIMARY_TYPE	Number of Crimes	Number of Arrests	Rate of Arrests
NARCOTICS	51	50	98.04
THEFT	100	11	11.00
CRIMINAL TRESPASS	13	11	84.62
CRIMINAL DAMAGE	55	5	9.09
OTHER OFFENSE	29	5	17.24
DECEPTIVE PRACTICE	14	4	28.57
ROBBERY	9	3	33.33
PROSTITUTION	3	3	100.00
PUBLIC PEACE VIOLATION	3	2	66.67
SEX OFFENSE	3	2	66.67
GAMBLING	2	2	100.00
LIQUOR LAW VIOLATION	2	2	100.00

To gain further insights, let's reorder the results from the previous slide, by number of crimes committed to understand rate of arrest for the most common crime types.

Query 16:

```
SELECT PRIMARY_TYPE, 'Number of Crimes', 'Number of Arrests', ('Number of Arrests' / 'Number of Crimes') * 100 AS 'Rate of Arrests' FROM crime_percent ORDER BY 'Number of Crimes' DESC;
```

Insights: The output shows the top 10 most reported types of crimes.

- THEFT, CRIMINAL DAMAGE, BURGLARY, and MOTOR VEHICLE THEFT have low arrest rates, ranging from 0% to 11%, even though their crime counts exceed 20.
- Notably, THEFT, the most frequently occurring crime with 100 incidents, has an arrest rate of just 11%.
- If crimes like THEFT, which have particularly high number of crime counts, have a low arrest rate, they can significantly contribute to the overall reduction in arrest rates for those communities.

PRIMARY_TYPE	Number of Crimes	Number of Arrests	Rate of Arrests
THEFT	100	11	11.00
CRIMINAL DAMAGE	55	5	9.09
NARCOTICS	51	50	98.04
OTHER OFFENSE	29	5	17.24
BURGLARY	27	1	3.70
MOTOR VEHICLE THEFT	22	0	0.00
DECEPTIVE PRACTICE	14	4	28.57
CRIMINAL TRESPASS	13	11	84.62
ROBBERY	9	3	33.33
OFFENSE INVOLVING CHILDREN	4	1	25.00

As seen, THEFT can heavily impact community arrest rates. Let's now focus on these communities where this pattern is most pronounced.

Query 17:

```
SELECT CS.COMMUNITY_AREA_NAME, CPT.PRIMARY_TYPE, COUNT(CR.ID) AS
'Number of Crimes' FROM CENSUS AS CS CROSS JOIN (SELECT DISTINCT
PRIMARY_TYPE FROM CRIME) AS CPT LEFT JOIN CRIME AS CR ON
CS.COMMUNITY_AREA_NUMBER = CR.COMMUNITY_AREA_NUMBER AND
CR.PRIMARY_TYPE = CPT.PRIMARY_TYPE WHERE COMMUNITY_AREA_NAME IN
("Austin", "Near West Side", "Englewood", "Humboldt Park") GROUP BY
CS.COMMUNITY_AREA_NAME, CPT.PRIMARY_TYPE HAVING 'Number of Crimes' > 0
ORDER BY CS.COMMUNITY_AREA_NAME, 'Number of Crimes' DESC;
```

Insights:

- From the output, it is clear that Austin, Englewood, Near West Side, Humboldt Park and consistently report THEFT as their highest-ranking crime.
- In Austin, THEFT accounts for 30.76% of all reported crimes.
- Englewood has an even higher proportion, with THEFT making up 38.46% of its total crimes.
- In Humboldt Park, THEFT constitutes 28.57% of the crimes reported in that community.
- Near West Side has the highest percentage, with THEFT representing 41.67% of its total crimes.

COMMUNITY_AREA_NAME	PRIMARY_TYPE	Number of Crimes
Austin	THEFT	8
Austin	NARCOTICS	7
Austin	BURGLARY	3
Austin	CRIMINAL DAMAGE	2
Austin	OTHER OFFENSE	2
Austin	MOTOR VEHICLE THEFT	1
Austin	PROSTITUTION	1
Austin	KIDNAPPING	1
Austin	CONCEALED CARRY L...	1
Englewood	THEFT	5
Englewood	BURGLARY	2
Englewood	MOTOR VEHICLE THEFT	2
Englewood	CRIMINAL DAMAGE	1
Englewood	NARCOTICS	1
Englewood	OTHER OFFENSE	1
Englewood	CRIM SEXUAL ASSAULT	1
Humboldt park	NARCOTICS	5
Humboldt park	THEFT	4
Humboldt park	OTHER OFFENSE	3
Humboldt park	CRIMINAL DAMAGE	1
Humboldt park	NON-CRIMINAL (SUBJ...)	1
Near West Side	THEFT	5
Near West Side	NARCOTICS	3
Near West Side	MOTOR VEHICLE THEFT	2
Near West Side	CRIMINAL TRESPASS	1
Near West Side	NON - CRIMINAL	1

OBSERVATIONS:

01

For these communities, THEFT stands out as the most frequent crime, yet it has an arrest rate of just 11%.

02

With THEFT occurring in such high numbers and having one of the lowest arrest rates, it directly contributes to the overall reduction in arrest rates within these communities.

03

In communities where low-arrest crimes like THEFT dominate, the overall arrest rate naturally declines, highlighting the critical role crime type plays in shaping community arrest dynamics.



CONCLUSION



01

Our analysis shows that certain community areas, like AUSTIN, have disproportionately higher crime rates, particularly for THEFT and NARCOTICS.

02

THEFT is the most recorded crime, with 100 incidents—almost double that of the second-highest crime, NARCOTICS, which has 55 incidents. However, THEFT has an arrest rate of just 11%, much lower than other crimes.

03

The low arrest rate of THEFT contributes to a decline in overall arrest rates in the communities where it occurs frequently, suggesting that the types of crimes prevalent in an area significantly influence its arrest dynamics.

04

The low arrest rate may also be a key factor in THEFT's high recurrence across many Chicago communities, indicating that without effective intervention, such crimes continue to thrive.

05

To tackle these challenges, increasing surveillance, boosting community policing, and prioritizing arrests for frequently occurring crimes like THEFT could help reduce crime rates and enhance public safety.