

Stanley Huang

Data Science

7/17/2022

Paul & Abhi

Crime in Chicago During 2019

Chicago is known for many things, the Willis/Sears Tower, “The Bean”, our amazing culture and food, and much more, however we’re also infamous for our crime. As the city grew so did our crime and now we’re depicted as the “Crime Capital” of the U.S. This issue has persisted for too long and has not only given us a bad reputation, but most importantly greatly impacted the lives of the people that live in our city. Children are growing up surrounded by news of constant crime, many are afraid of going out, and many have become victims of such crime. My goal with this [dataset](#) is to figure out where and what crime is being committed, so that we know what to really focus on in an effort to reduce crime in the city.

To do this using the data provided, I needed to first clean the data and get rid of anything unnecessary, so I removed everything but the type of crime, location, ward, and community area. After doing this, I used the summary function on the type of crimes committed, and by doing this I was able to single out the top 5 types of crime committed and the amount of them. Using this information, I created a dataframe for each of the 5 types of crime, and by doing this I was able to use the summary function and see where the most common location for each type of crime was. With this data, I compiled a table containing all this information, which you can see in Figure 1.

Figure 1. Table With the Top 5 Most Committed Crimes in 2019

Crime	Amount	Percent of All Crime (Not Rounded)	Most Common Location	Amount of Crime in Location
Theft	62476	23.93%	Street	13348
Battery	49509	18.96%	Apartment	12131
Criminal Damage	26681	10.21%	Street	8738
Assault	20618	7.89%	Residence	3395
Deceptive Practice	18904	7.24%	Residence	5721

This, however, is data pertaining to Chicago in general, and we can do much more by singling out specific wards/community areas, which I did by creating 2 histograms showing the amount of crime in each ward/community area. Figure 2 shows the amount of crime in each ward, and figure 3 shows the amount in each community area.

Figure 2. Histogram Showing the Amount of Crime in Each Ward

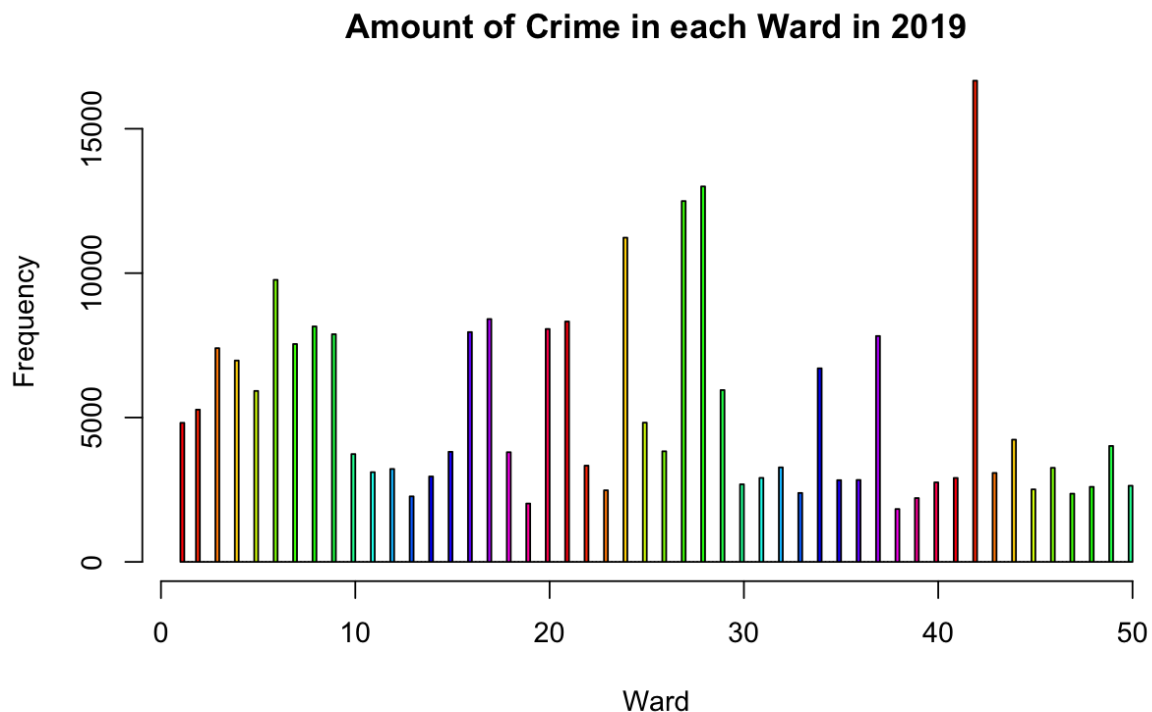
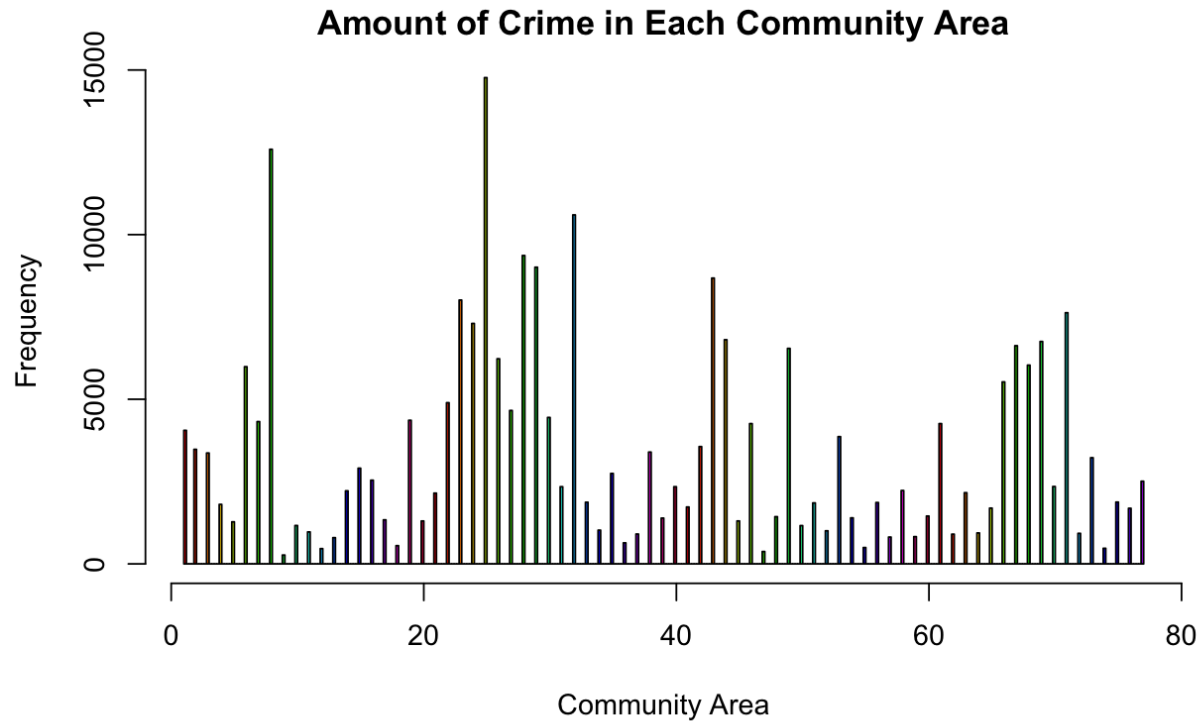


Figure 3. Histogram Showing the Amount of Crime in Each Community Area



By viewing these 2 histograms, we can see that top 5 wards with the most crime are wards 42, 28, 27, 24, and 6, and that the top five community areas with the most crime are 25, 8, 32, 28, and 29. Using this information, if we simply filter by those specific wards/community areas and use the same methods as we did earlier, we can find information about crime in those areas.

Figure 4. Table With the 5 Wards with the Highest Criminal Activity

Ward	Most Common Crime	Amount	Percent of All Crime in Ward (Not Rounded)	Most Common Location in Ward	Amount in Location
42	Theft	8604	51.63	Resteraunt	2427
28	Battery	2736	21.04	Street	2736
27	Theft	3622	28.98	Street	3257

24	Narcotics	2447	32.25	Street	2809
6	Battery	2373	24.29	Street	2486

Figure 5. Table With the 5 Community Areas With the Most Crime

Community Area	Most Common Crime	Amount	Percent of All Crime in Area (Not Rounded)	Most Common Location in Area	Amount in Location
25	Battery	3480	23.10	Street	3412
8	Theft	5723	45.45	Street	1498
32	Theft	5596	52.79	Resteraunt	1442
28	Theft	3472	37.07	Street	2155
29	Narcotics	2167	24.15	Street	2103

In both of these tables, data was taken from areas/wards mainly from central Chicago and the west side of Chicago. We also see that battery and theft are common, which isn't surprising as they're the 2 highest occurring crimes, however we also see narcotics instead of something like criminal damage or assault, which is more common generally. Something similar is observed when we view where crime is committed. As expected, the street is a common location for theft, however what is surprising is that in some wards/areas, restaurants were the most common location for theft, and in battery cases, the street was the most common location, even though an apartment was the most common location in Chicago as a whole.

From everything we've observed, we can conclude that central Chicago and the west side of Chicago have the highest crime rates, however we must also keep in mind that this is only from reported crime and isn't a completely accurate measurement for how dangerous an area is. Theft and battery are also the most common crimes, with many of the victims being on the street and in an apartment, though places like restaurants can also be places where there's lots of crime,

especially in ward 42 or community area 32 where over 50% of theft was reported to occur in a restaurant. That being said, streets and other places where people congregate are still the most common places where people are affected by crime, and so we would need to focus more on keeping the streets safe especially in the west and central side of Chicago. We would also have to watch out for other crimes like criminal damage and assault, and figure out a way to deal with crimes in residences/apartments more efficiently.

With my findings from this dataset, I'd like to continue researching crime or another social issue similar to this. I'd like to learn more about how other factors like demographics may affect this crime and how it plays a role into it, and using these different factors make an accurate measurement for how dangerous an area is. Looking more into the crimes committed such as what is the most common thing stolen, or what type of person is most likely to get robbed would also be an interesting analysis I could do next.