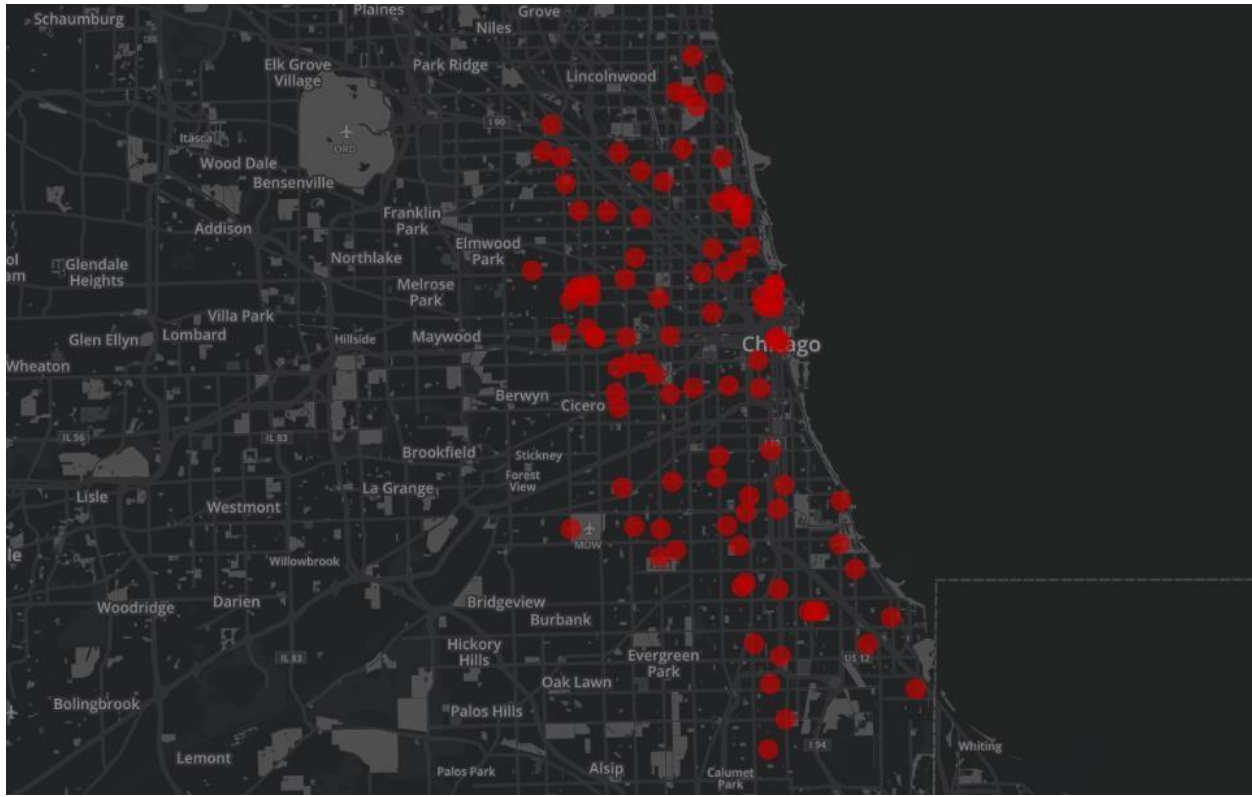


# Crime Data of Chicago

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## ABSTRACT:

In this project, I visualize the crime data for city of Chicago. To answer some kind of questions like at what time the specific crime occurs most? Which are the top 100 places where crime occur most? Etc. and make it easy to analyze the dataset.

## Introduction:

Name: Chicago Crime Dataset (from 2001 to present)

Type: public Safety

Source: [City Of Chicago Data Portal](https://data.cityofchicago.org/)

URL: <https://data.cityofchicago.org/resource/3uz7-d32j.json>

Data Type: JSON

Description: The given URL will return the JSON data. This dataset reflects incidents of crime (exception of murder) that occurred in the city of Chicago from 2001 to present minus most recent seven data. Data is extracted from the Chicago Police Department's CLEAR (Citizen Law Enforcement Analysis and Reporting) system. This is the primary crime information so it may be changed After some investigation. This dataset is available through soda API by Socrata.

### OVERVIEW:

There are four interactive visualizations which are connected to analyze the different types of crimes to answer some questions. Before I start visualize this dataset I filter it out through the Socrata API to select specific attribute only.

- (1) Top 100 Point On Map
- (2) Multi-Series Line Chart for Crimes over Time
- (3) Daily Rhythm Of Crime
- (4) Arrest vs. Not Arrest

#### (1) Top 100 point On Map:

Here in this visualization I want to visualize the top 100 location where crime occurred most. For that first of all I draw geo tile map using (<http://d3js.org/d3.geo.tile.v0.min.js>). And I grouped the data using key as latitude and longitude. By this map we can see the locations where crime occurs most in this city.

Mark: point

Channel: Position, color, shape

#### (2) Multi-Series Line Chart for Crimes over Time:

This is my single visualization that cover all the crime over time. This visualization took most time. Because we can analyze the trend of any

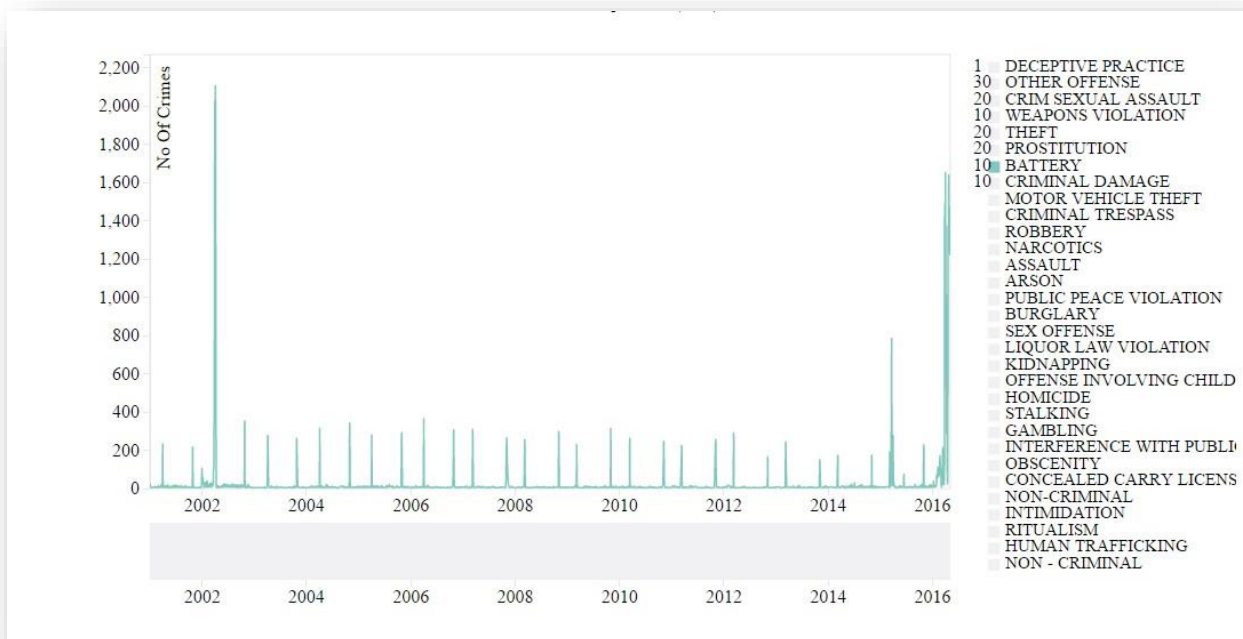


Figure 1 it shows the number of crime time wise. You can select any crime type from right side button and you can also select time window from rectangle (bottom).and on mouse over rect shows the count for that specific x (time).

specific crime type over time and we can compare it with other type too.

As shown in Figure 1 you can select any crime type from the right side panel which shows the all crime types. As you select any crime type it will show the line chart from 2001 to 2016. Here you can select **multiple crimes** to compare the trends over time. Here x axis will remain same because it shows the time but the scale of the y axis will updated as per the crime which has maximum count.

One Interaction is on **mouse hover** over the rect where it shows the line it will show the count on right side with the name of crime type for specific date by bisecting method.

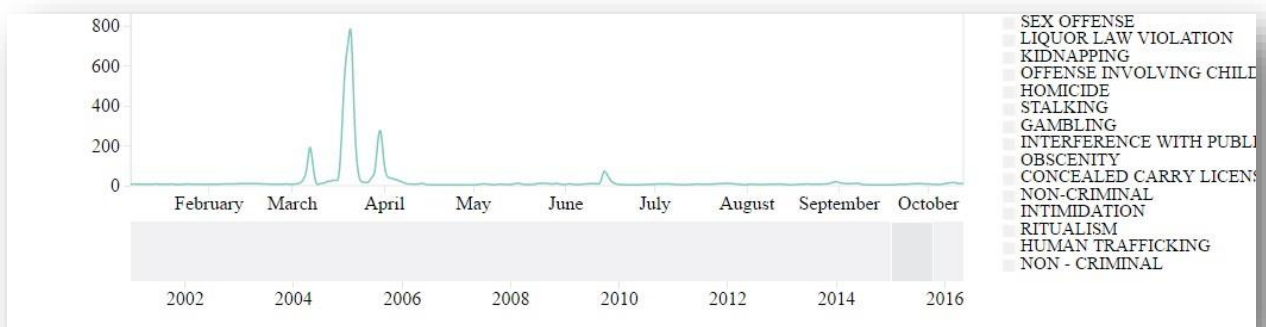


Figure 2 Time Window

One more thing is if you want to look trend for specific month or specific period you can select the **time window** from rectangle at bottom as shown in figure 2.

Mark: line

Channel: Position, color hue (types of crime)

Question: we can analyze the trend for specific crime type over time  
Or compare with other crime type

### (3) Daily Rhythm Of Crime:

Here to analyze the daily cycle of the crime I draw bar chart over the time. As show in Figure 3 I draw bar chart for all the crime and after that bar charts for the specific crime type which we have selected above in multi-line chart.

As per Figure 3 clear trend for Prostitute is to this crime occurs in nights.

We can compare the daily cycle of the crime.

Mark: line

Channel: Position

Question: Which crime occur in early in the days or latter.

### (4) Arrest vs. Not Arrest:

In my datasets I have one Boolean attribute which tell which case turns in to arrest. To show this I used normalize stack bar chart which show the percentage of crime for specific year turn into arrest and not arrest.

Mark: line

Channel: Position, Color

Question: How many Percentage of Crime case end in arrest in specific years? Or analyze the trends of percentage.

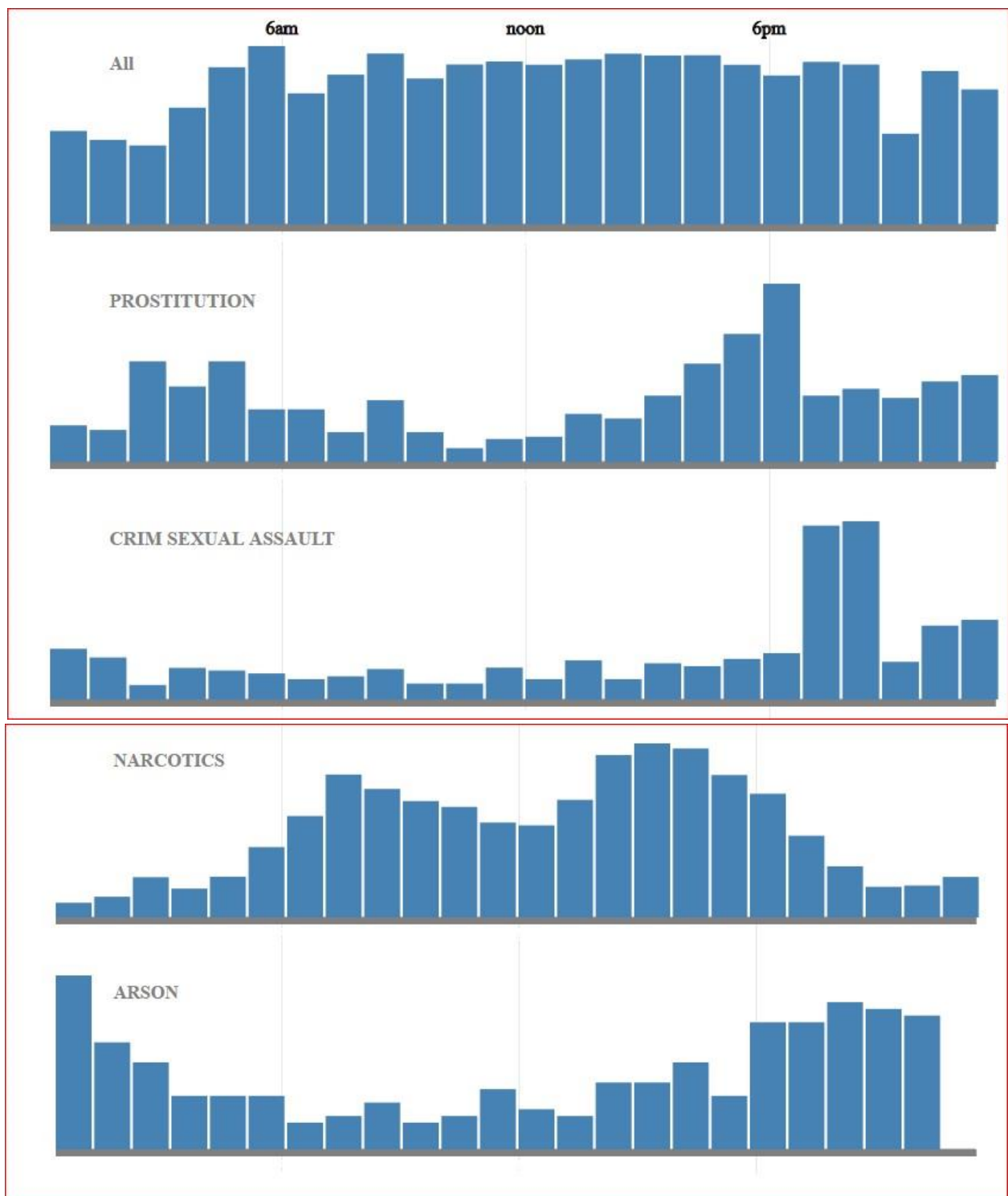


Figure 3 Daily Rhythm

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JavaScript For geo Tile Map
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For Scrolling