

# Exploratory Analysis of a Crime Data

Team: Extra-Idiotic Family

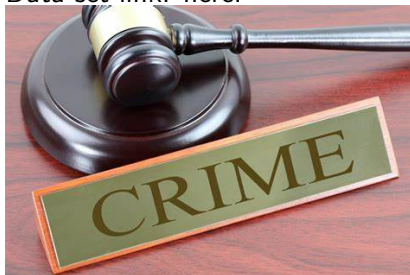
University of Nebraska-Lincoln

December 4, 2022

# Dataset Discription

This dataset reflects incidents of crime in the City of Los Angeles dating back to 2020. There are 521k rows (each row is a crime incident) and 28 columns (Variables)

Data set link: [here](#).



# Variables Used under Analysis

- ▶ Initially there were 28 variables in the data set.
- ▶ We focused only several variables for our analysis.

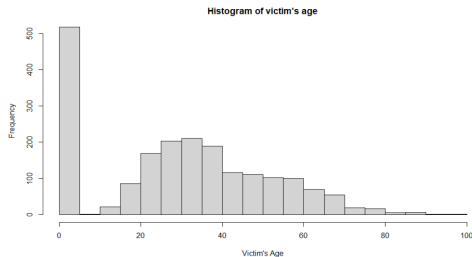
Variable	Description
AREA	Geographic Areas in Los-Angeles
AREA NAME	Name designation of the area
Crm cd	crime code
Crm cd Desc	Defines the crime Code Provided
Vict Age	Age of the Victim
Vict Sex	Sex of the Victim
Vict Descent	Descent Code of the Victim
Premis Desc	Premises Description
Weapon Desc	weapon used in crime

## Method and analysis (re-categorizing crimes)

- ▶ originally there were 73 types of crime.
- ▶ We re-categorized them as follows

<b>crime type</b>	<b>n</b>
ASSAULT	441
BURGLARY	1012
EXTREME CRIMES	86
OTHER CRIMES	75
ROBBERY	94
SEXUAL MISCONDUCT	37
TRESPASSING	30
VANDALISM	186
VIOLATION	39

# Method and analysis (Cleaning Age variable)



## Highlights

- ▶ Unusual number of Zero records.
- ▶ replace them with median of age.
- ▶ continue the analysis.

## Method and analysis (Re-categorizing Descent variable)

**Victim descent    n**

264

A                    39

B                    298

C                    4

F                    8

H                    594

J                    4

K                    6

L                    1

O                    172

P                    2

U                    3

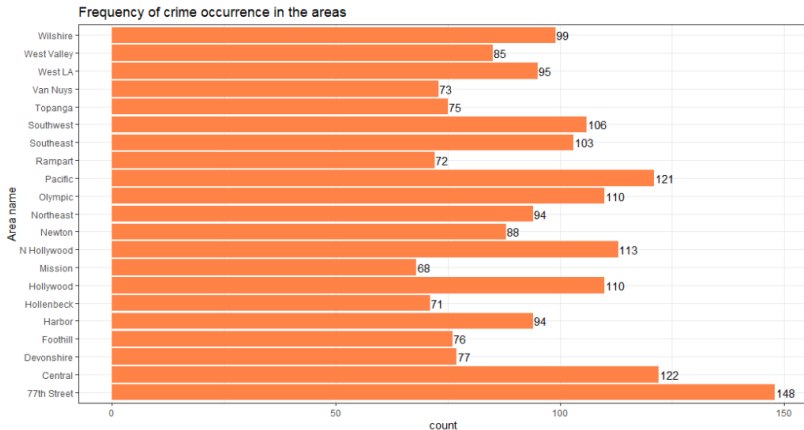
V                    2

W                    403

Symbol	Descecnt
A	Other Asian
B	Black
H	Hispanic/Latin/Mexican
O	other
W	white
	Minor or Unknown

# Relationship with the area and the crime

which area is the most awfull to live.



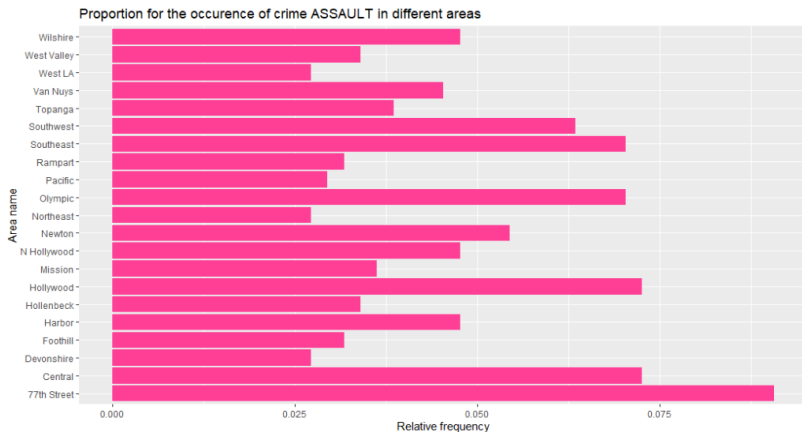
## Highlights

- ▶ 77th street has the highest number of crimes.
- ▶ 100+ crimes have been reported over some other areas
- ▶ Please avoid those areas.





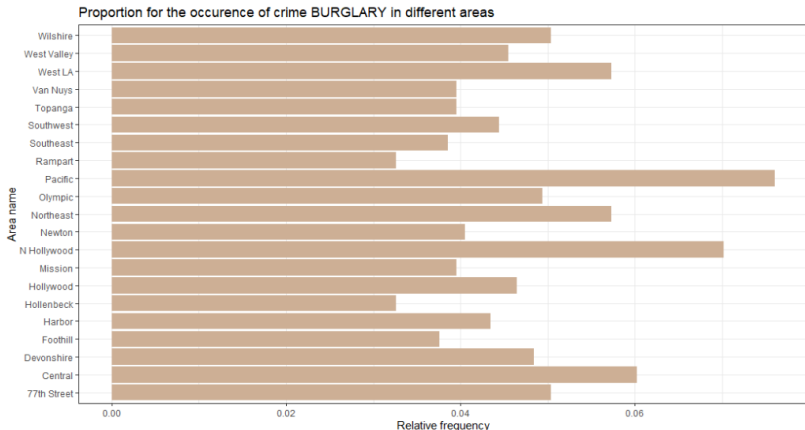
# Relationship between the area and the crime "Assault"



## Highlights

- ▶ 77th street
- ▶ Southeast, Olympic, Hollywood, Central

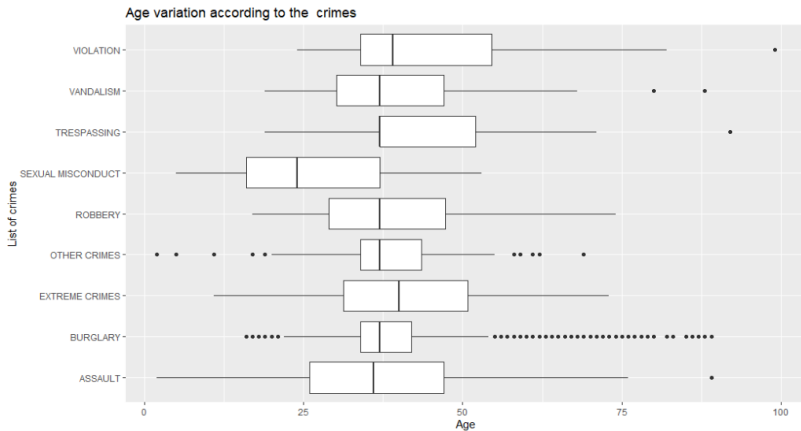
# Relationship between the area and the crime "Burglary"



## Highlights

- ▶ Pacific
- ▶ West LA, Northeast, N Hollywood, Central

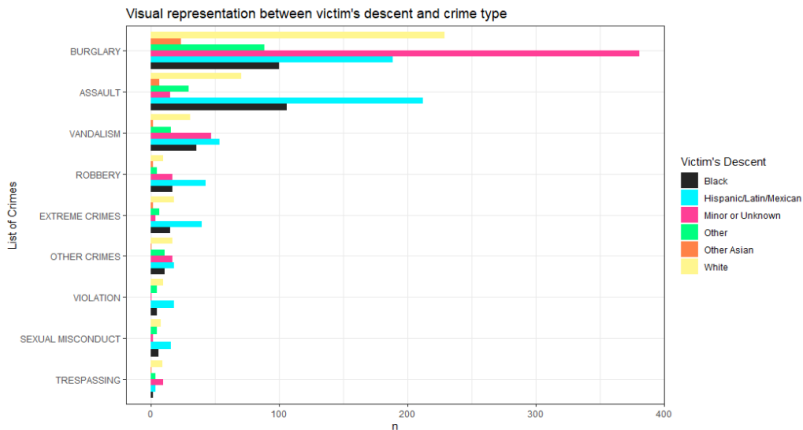
# Relationship between the age and the crime type



## Highlights

- Sexual Misconduct

# Relationship between the Descent and the crime type



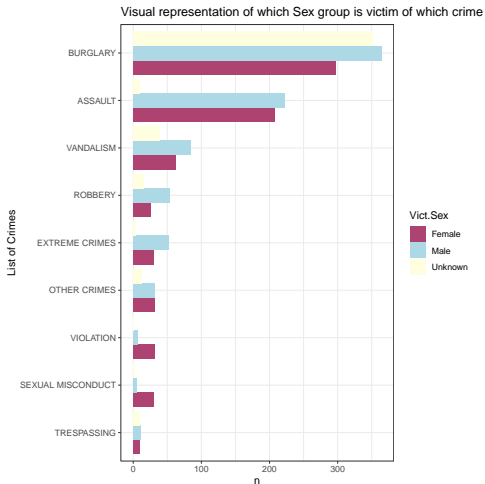
## Highlights

- ▶ Burglary - White people
- ▶ All other types - Hispanic/Latin/Mexican people

# Crime and Victim's Sex

- ▶ Explore which sex groups are facing which type of crime more.
- ▶ The variable victim's sex was coded as Male, Female, and Unknown (Missing or reported as unknown).

# Answer to Crime and Victim's Sex



## Highlights

- ▶ Burglary, assault, vandalism, robbery and extreme crimes are mostly happening with the males.
- ▶ Females are more victim of violation and sexual misconduct compared to males.
- ▶ Crimes other than the specified ones are occurring both equally.

# Premises of crime

- ▶ Explore the premises of different crimes we defined.
- ▶ We are reporting the premises which appeared more than 3% of the times for the crimes.

# Premises of Burglary

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Premises of Burglary

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DRIVEWAY

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GARAGE/CARPORT

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MULTI-UNIT DWELLING (APARTMENT, DUPLEX, ETC)

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OTHER BUSINESS

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PARKING LOT

---

SINGLE FAMILY DWELLING

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STREET

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**Highlights:** Driveway, garage, multi-unit or single family dwelling, street, parking lot are the frequently occurred premises for the crime burglary.



# Premises of Assault

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Premis of Assault

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MULTI-UNIT DWELLING (APARTMENT, DUPLEX, ETC)

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PARKING LOT

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SIDEWALK

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SINGLE FAMILY DWELLING

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STREET

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**Highlights:** Assault is being reported frequently taking place in street, sidewalk, parking lot, and single family or multi-unit dwelling.

# Premis of Sexual Misconduct

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Premis of Sexual Misconduct

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MULTI-UNIT DWELLING (APARTMENT, DUPLEX, ETC)

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OTHER BUSINESS

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POLICE FACILITY

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SIDEWALK

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SINGLE FAMILY DWELLING

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STREET

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**Highlights:** Sexual misconduct is similar to the premises that were reported for burglary and assault but the interesting is that we found that **police facility** is a frequently occurred premise.

# Premis of Extreme Crimes

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Premis of Extreme Crimes

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ALLEY

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MULTI-UNIT DWELLING (APARTMENT, DUPLEX, ETC)

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PARKING LOT

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SIDEWALK

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SINGLE FAMILY DWELLING

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STREET

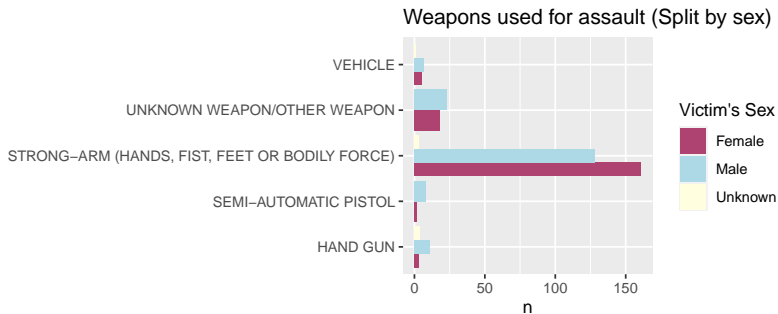
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**Highlights:** Alley is a new premise we observed in case of extreme crimes and rest of the premises are same as observed for previous crimes.

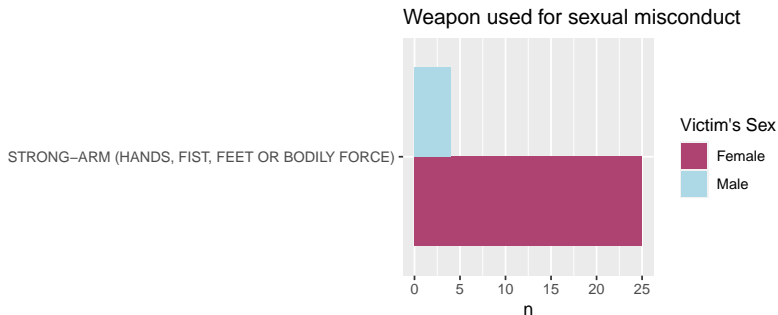
# Weapons used in crime

- ▶ we explored whether for committing a particular type of crime commit-er has preference over the weapons based on the victim's sex.
- ▶ We reported the weapons used more than 10 times for committing a particular crime in the data-set.

# Answer to weapons used in Assault



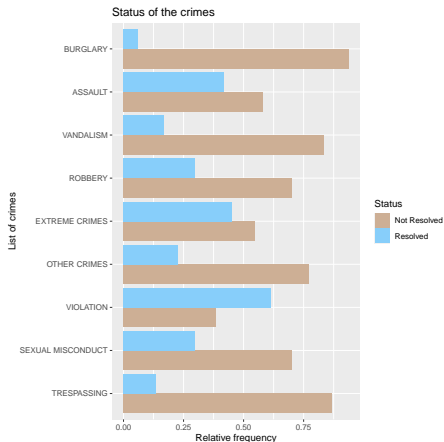
# Answer to weapons used in sexual misconduct



## Current status of the crimes

- ▶ We explored which type of crimes are getting resolved mostly and which type are not
- ▶ We re-categorized the variable indicating case status into "Not Resolved" if the investigation is continued otherwise coded as "Resolved".

# Answer to status of the crimes



## Highlights

- ▶ The crime violation is getting resolved more than any any other crimes in the data-set.
- ▶ Trespassing, burglary, robbery, and sexual misconduct has a fairly large difference between proportion of resolved and not resolved cases.
- ▶ Assault and extreme crime has shorter difference between proportion resolved and not resolved.