

Exploratory Analysis of a Crime Data

Team: Extra-Idiotic Family

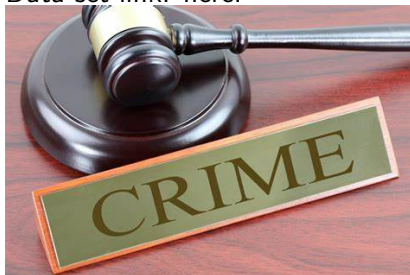
University of Nebraska-Lincoln

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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.

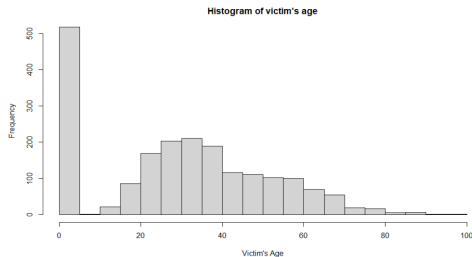
Variable	Description
AREA	Geographic Areas in Los-Angeles
AREA NAME	Name designation of the area
Crm cd	crime code
Crm cd Desc	Defines the crime Code Provided
Vict Age	Age of the Victim
Vict Sex	Sex of the Victim
Vict Descent	Descent Code of the Victim
Premis Desc	Premises Description
Weapon Desc	weapon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

Method and analysis (re-categorizing crimes)

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

crime type	n
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

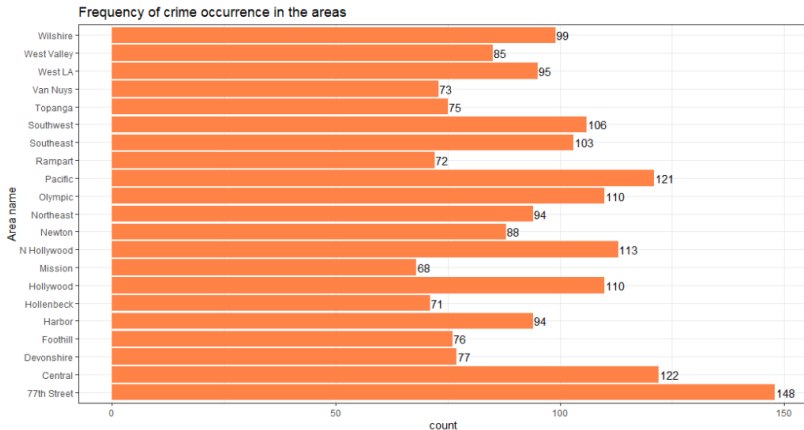
V 2

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.

Which type of crimes ocured most

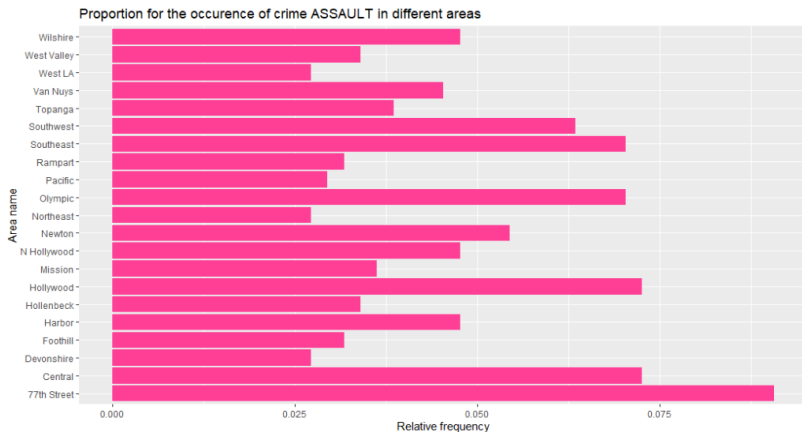
Highlights

► Burglary And Assault

crime type	n
ASSAULT	441
BURGLARY	1012
EXTREME CRIMES	86
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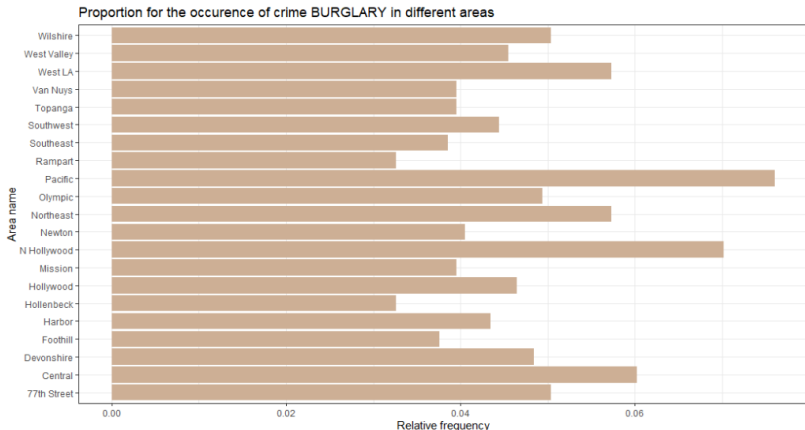
Relationship between the area and the crime "Assault"



Highlights

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

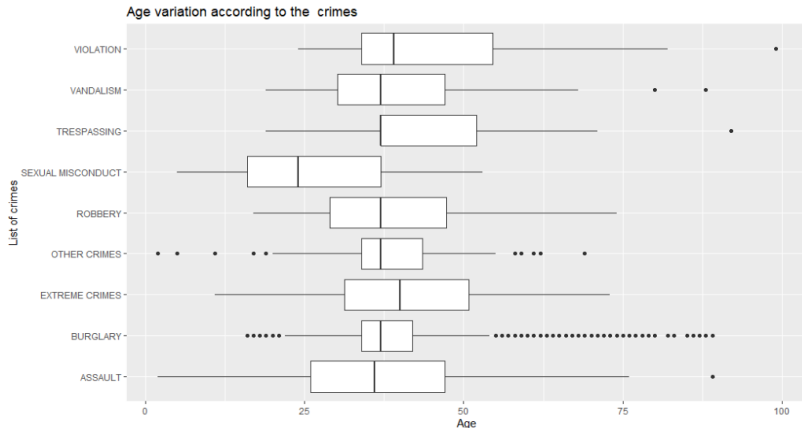
Relationship between the area and the crime "Burglary"



Highlights

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

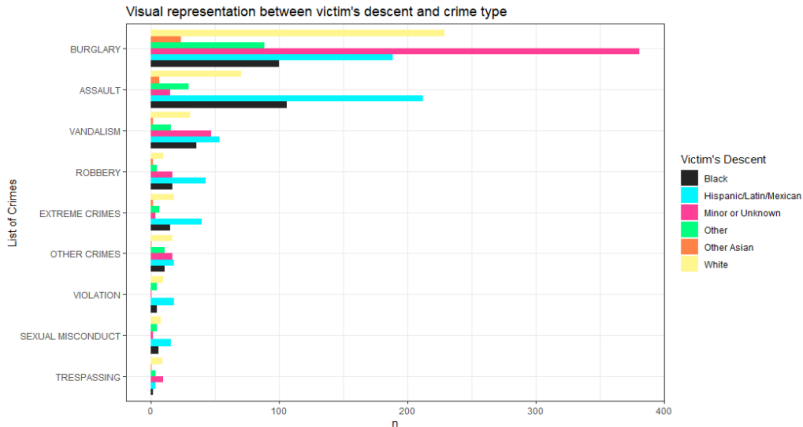
Relationship between the age and the crime type



Highlights

- From the IQR we can roughly say majority of victims are in between 25 and 50 for all the crimes except the sexual misconduct.

Relationship between the Descent and the crime type



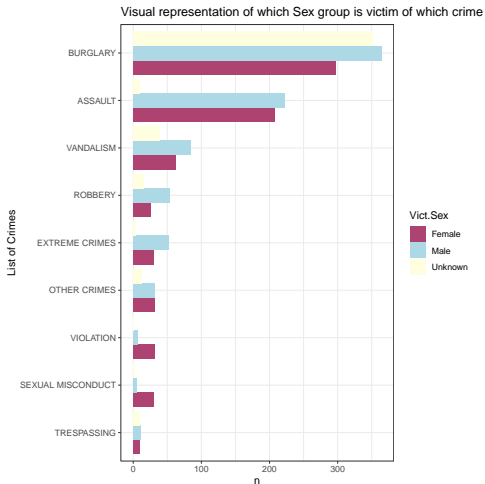
Highlights

- ▶ Hispanic/Latin/Mexican have faced every type of crime more except for the burglary
- ▶ Burglary is faced by White people more.
- ▶ Assault is faced by a considerable number of black 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

Premises of Burglary

DRIVEWAY

GARAGE/CARPORT

MULTI-UNIT DWELLING (APARTMENT, DUPLEX, ETC)

OTHER BUSINESS

PARKING LOT

SINGLE FAMILY DWELLING

STREET

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

Premises of Assault

Premis of Assault

MULTI-UNIT DWELLING (APARTMENT, DUPLEX, ETC)

PARKING LOT

SIDEWALK

SINGLE FAMILY DWELLING

STREET

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

Premis of Sexual Misconduct

Premis of Sexual Misconduct

MULTI-UNIT DWELLING (APARTMENT, DUPLEX, ETC)

OTHER BUSINESS

POLICE FACILITY

SIDEWALK

SINGLE FAMILY DWELLING

STREET

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

Premis of Extreme Crimes

ALLEY

MULTI-UNIT DWELLING (APARTMENT, DUPLEX, ETC)

PARKING LOT

SIDEWALK

SINGLE FAMILY DWELLING

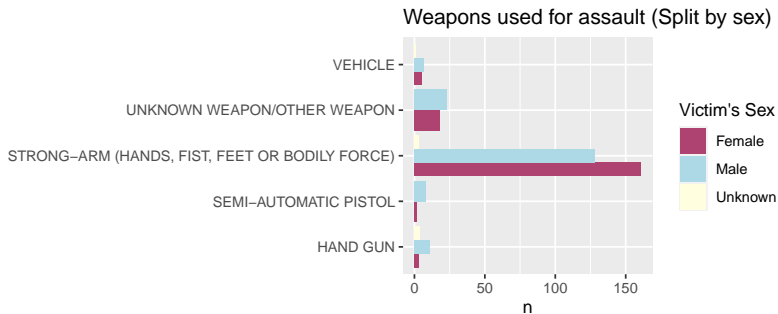
STREET

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.

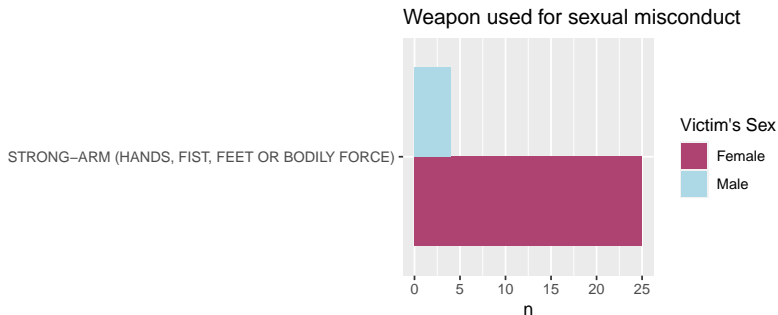
Weapons used in crime

- ▶ 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



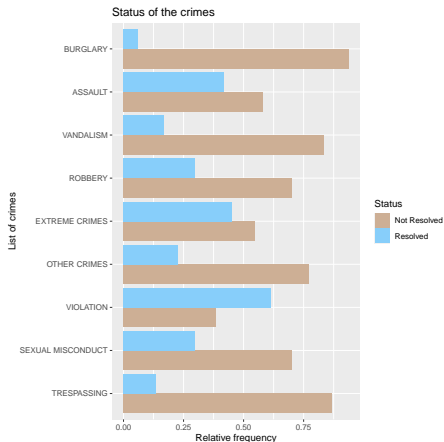
Answer to weapons used in sexual misconduct



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.