

# Exploratory Analysis of a Crime Data

Team: Extra-Idiotic Family

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# Loading data

```
data<-read.csv("Subset_data.csv")
library(tidyverse)

## -- Attaching packages
----- tidyverse
1.3.2 --
## v ggplot2 3.3.6      v purrr 0.3.4
## v tibble 3.1.8       v dplyr 1.0.10
## v tidyr 1.2.1        v stringr 1.4.1
## v readr 2.1.2        v forcats 0.5.2
## -- Conflicts
-----

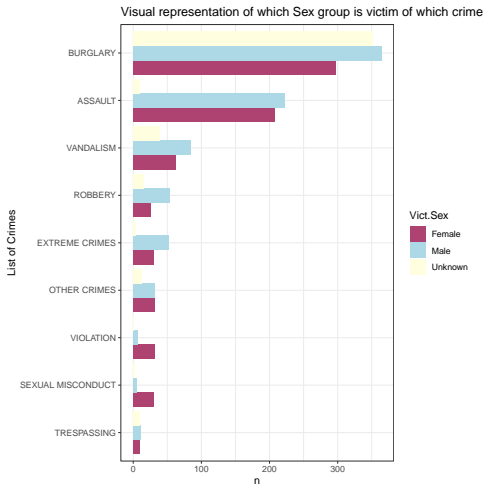
tidyverse_conflicts() --
## x dplyr::filter() masks stats::filter()
## x dplyr::lag()     masks stats::lag()

library(knitr)
library(kableExtra)
```

# 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)

---

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

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Premis of Assault

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MULTI-UNIT DWELLING (APARTMENT, DUPLEX, ETC)

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PARKING LOT

---

SIDEWALK

---

SINGLE FAMILY DWELLING

---

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)

---

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

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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

---

SIDEWALK

---

SINGLE FAMILY DWELLING

---

STREET

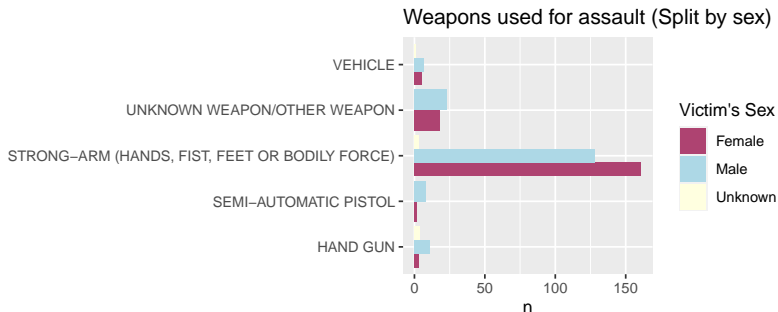
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**Highlights:** Alley is a new premise we observed in case of extreme crimes and rest of the premises are same as observed for previous crimes.

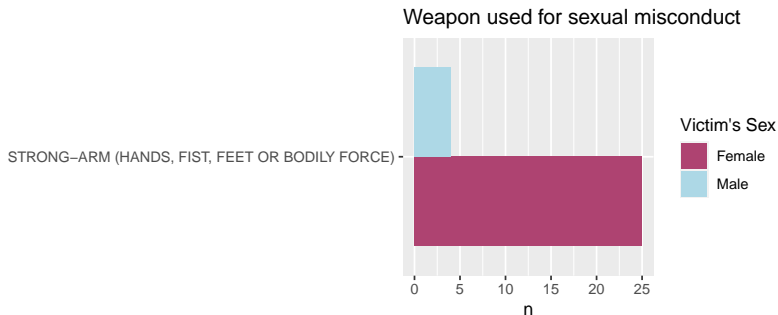
# Weapons used in crime

- ▶ 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



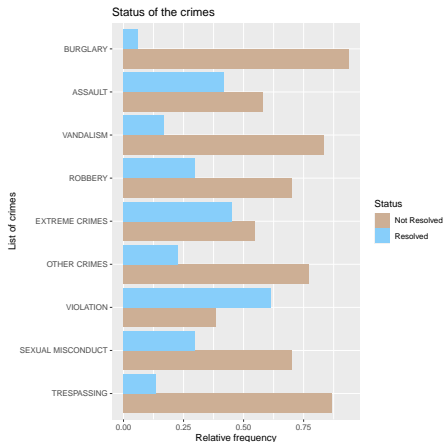
# Answer to weapons used in sexual misconduct



# 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.