Exploratory Analysis of a Crime Data

Team: Extra-Idiotic Family

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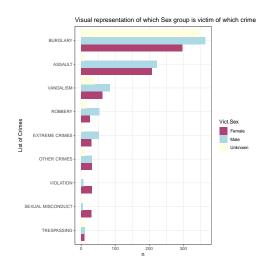
Loading data

```
data<-read.csv("Subset_data.csv")</pre>
library(tidyverse)
## -- Attaching packages
              1.3.2 --
## v ggplot2 3.3.6 v purrr 0.3.4
                     v dplyr 1.0.10
## v tibble 3.1.8
## 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

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

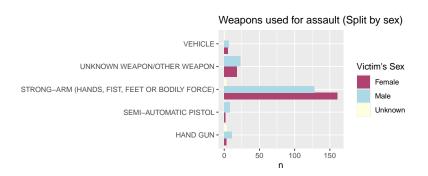
Premis of Extreme Crimes
ALLEY
MULTI-UNIT DWELLING (APARTMENT, DUPLEX, ETC)
PARKING LOT
SIDEWALK
SINGLE FAMILY DWELLING
STREET

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.

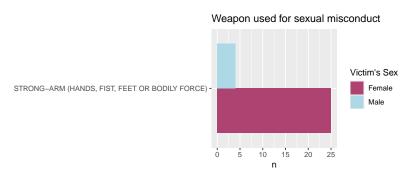
Weapons used in crime

- 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



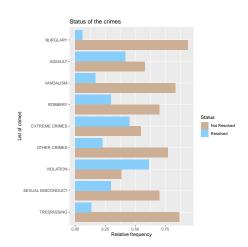
Answer to weapons used in sexual misconduct



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.