Advanced Data Visualization Lab Sem 7 B.Tech. Program Elective Rahul Chalwadi 2021700012

Expt 4: Crime Data

Problem Statement: Create basic charts using R programming language on dataset Crime or Police / Law and Order

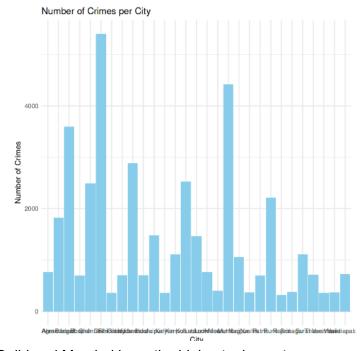
- Basic Bar chart, Pie chart, Histogram, Scatter plot, Bubble plot
- Write observations from each chart

Software Used: R

Dataset Used: Indian Crimes Dataset

1. Bar Chart

```
# Bar chart for the number of crimes per city
ggplot(crime_data, aes(x = City)) +
  geom_bar(fill = "skyblue") +
  labs(title = "Number of Crimes per City", x = "City", y = "Number of Crimes") +
  theme_minimal()
```



Delhi and Mumbai have the highest crime rates.

2. Pie Chart

```
# Pie chart for the distribution of crimes by weapon used
weapon_distribution <- table(crime_data$Weapon.Used)

# Create the pie chart
pie(weapon_distribution,
    labels = names(weapon_distribution),
    main = "Distribution of Crimes by Weapon Used",
    col = rainbow(length(weapon_distribution)))</pre>
```

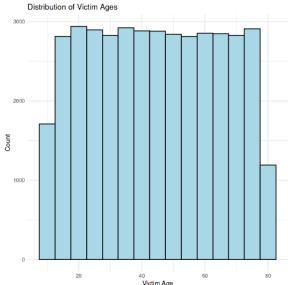
Distribution of Crimes by Weapon Used



There is almost equal distribution in the means used.

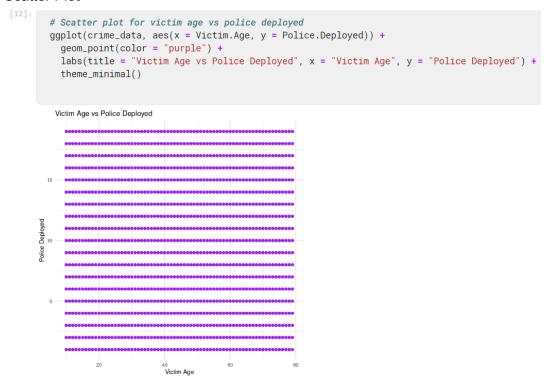
3. Histogram

```
ggplot(crime_data, aes(x = Victim.Age)) +
    geom_histogram(binwidth = 5, fill = "lightblue", color = "black") +
    labs(title = "Distribution of Victim Ages", x = "Victim Age", y = "Count") +
    theme_minimal()
```



It's somewhat a flat normal distribution over age.

4. Scatter Plot



The number of police deployed is almost uniform with victim age.

5. Bubble Plot

The different categories can be observed.