

# DSC640\_Exercise6\_2\_Asumbaraju\_R

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```
library(ggplot2)
library(reshape2)
library("dplyr")

##
## Attaching package: 'dplyr'
## The following objects are masked from 'package:stats':
##
##   filter, lag
## The following objects are masked from 'package:base':
##
##   intersect, setdiff, setequal, union

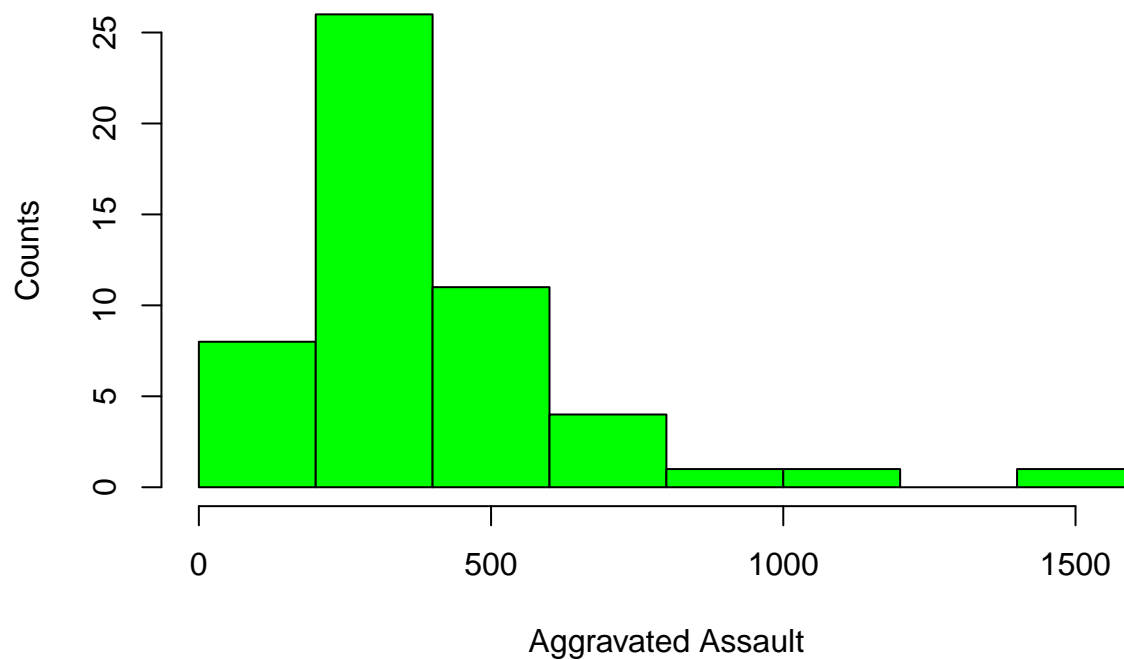
crime_df <- read.csv("C:/BU/DSC640/wk9-10/ex6-2/crimeratesbystate-formatted.csv")
crime_df <- crime_df[!(crime_df$state=='United States'),]
print(is.data.frame(crime_df))

## [1] TRUE
```

## Histogram

```
hist(crime_df$motor_vehicle_theft,
     main="Aggravated Assault Counts",
     xlab="Aggravated Assault",
     ylab="Counts",
     col="green",
     freq=TRUE)
```

## Aggravated Assault Counts

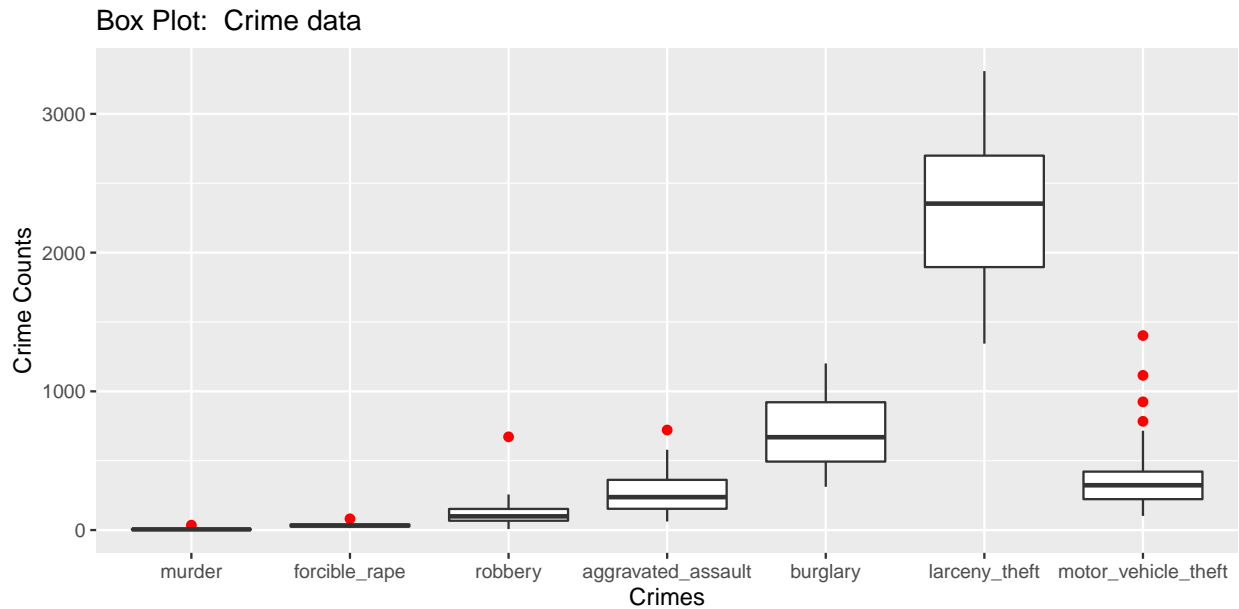


# Box Plot

```
crime_df1 <- subset(crime_df, select = -c(state))  
data_melt <- melt(crime_df1)
```

## No id variables; using all as measure variables

```
p <- ggplot(data_melt, aes(factor(variable), value))  
p + geom_boxplot(outlier.colour="red", outlier.shape=16,  
  outlier.size=2, notch=FALSE) +  
  ggtitle("Box Plot: Crime data") +  
  xlab("Crimes") +  
  ylab("Crime Counts")
```



# bullet chart

```
cr_df <- crime_df[,c("state","robbery")]
```

```
cr_df$mean <- 100
```

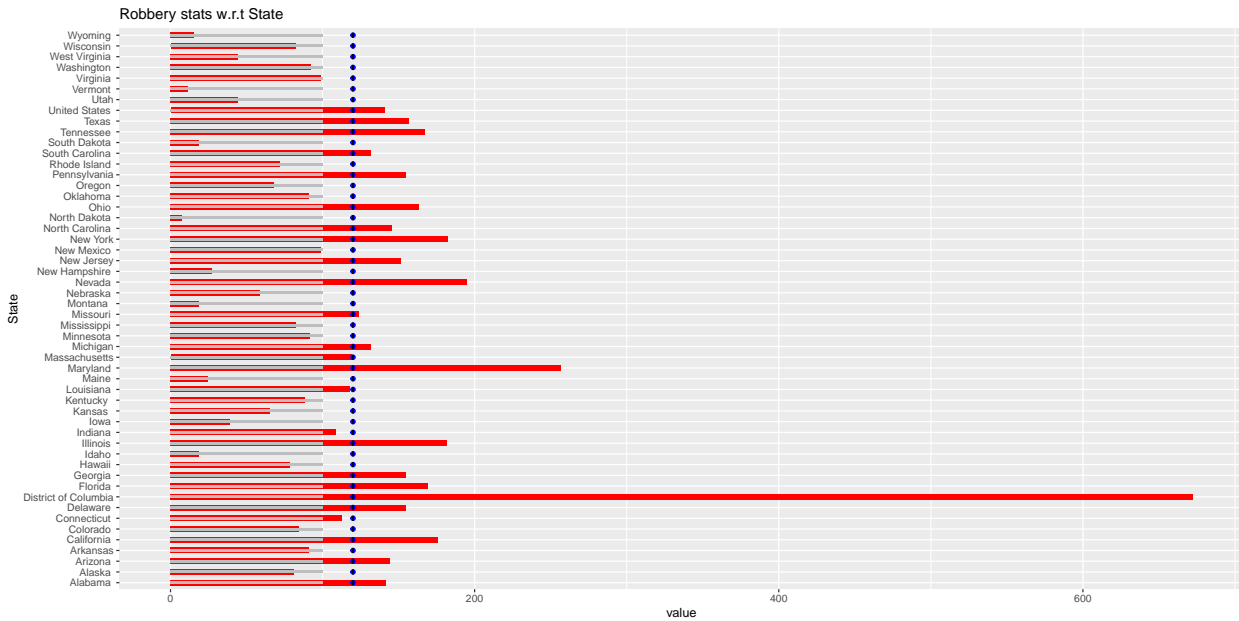
```
cr_df$target <- 120
```

```
p <- ggplot(cr_df, aes(robbery, state))
```

```
p <- ggplot(cr_df, aes(state, robbery))
```

```
p <- p + geom_col(fill="red", width=0.5) +
  geom_col(fill="gray", aes(state, mean), width=0.2) +
  geom_point(aes(state, target), colour="blue") +
  geom_errorbar(aes(y = target, x = state, ymin = target, ymax
    = target), width = .45) + coord_flip() +
  ggtitle("Robbery stats w.r.t State") +
  xlab("State") +
  ylab("value")
```

p



# an additional charts of choice – Pie Chart

```
mycols <- c("#0073C2FF", "#EFC000FF", "#868686FF", "#CDC686FF", "#CD534CFF")
```

```
cr_df=filter(cr_df, robbery > 178)
```

```
cr_df <- cr_df %>% arrange(desc(state)) %>% mutate(lab.ypos = cumsum(robbery) - 0.5*robbery)
cr_df
```

```
##           state robbery mean target lab.ypos
## 1         New York   182.7   100    120    91.35
## 2          Nevada   194.7   100    120   280.05
## 3        Maryland   256.7   100    120   505.75
## 4        Illinois   181.7   100    120   724.95
## 5 District of Columbia 672.1   100    120  1151.85
```

```
ggplot(cr_df, aes(x = "", y = robbery, fill = state)) +
  geom_bar(width = 1, stat = "identity", color = "white") +
  coord_polar("y", start = 0)+
  geom_text(aes(y = lab.ypos, label = robbery), color = "white")+
  scale_fill_manual(values = mycols) +
  theme_void()
```

