Assignment_6.2_Vayuvegula_Soma_Shekar_R

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```
##
## 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
## -- Attaching packages --------------------------------------- tidyverse 1.3.2 --
## v tibble  3.1.7     v purrr   0.3.4
## v tidyr   1.2.0     v stringr 1.4.0
## 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()
##
## Attaching package: 'reshape2'
##
##
## The following object is masked from 'package:tidyr':
##
##     smiths
##
##
##
## Attaching package: 'data.table'
##
##
## The following objects are masked from 'package:reshape2':
##
##     dcast, melt
##
##
## The following object is masked from 'package:purrr':
##
##     transpose
##
##
## The following objects are masked from 'package:dplyr':
##
##     between, first, last
```

```
##
##
##
## Attaching package: 'plotly'
##
##
## The following object is masked from 'package:ggplot2':
##
##     last_plot
##
##
## The following object is masked from 'package:stats':
##
##     filter
##
##
## The following object is masked from 'package:graphics':
##
##     layout
##
##
##
## Attaching package: 'reshape'
##
##
## The following object is masked from 'package:plotly':
##
##     rename
##
##
## The following object is masked from 'package:data.table':
##
##     melt
##
##
## The following objects are masked from 'package:reshape2':
##
##     colsplit, melt, recast
##
##
## The following objects are masked from 'package:tidyr':
##
##     expand, smiths
##
##
## The following object is masked from 'package:dplyr':
##
##     rename
##
##
## ------------------------------------------------------------------------------
##
## You have loaded plyr after dplyr - this is likely to cause problems.
## If you need functions from both plyr and dplyr, please load plyr first, then dplyr:
```

```
## library(plyr); library(dplyr)
##
## ------------------------------------------------------------------------------
##
##
## Attaching package: 'plyr'
##
##
## The following objects are masked from 'package:reshape':
##
##     rename, round_any
##
##
## The following objects are masked from 'package:plotly':
##
##     arrange, mutate, rename, summarise
##
##
## The following object is masked from 'package:purrr':
##
##     compact
##
##
## The following objects are masked from 'package:dplyr':
##
##     arrange, count, desc, failwith, id, mutate, rename, summarise,
##     summarize
##
##
## Registered S3 method overwritten by 'GGally':
##   method from
##   +.gg   ggplot2
```

```
df_crime<-read.csv("crimeratesbystate-formatted.csv")
head(df_crime,5)
```

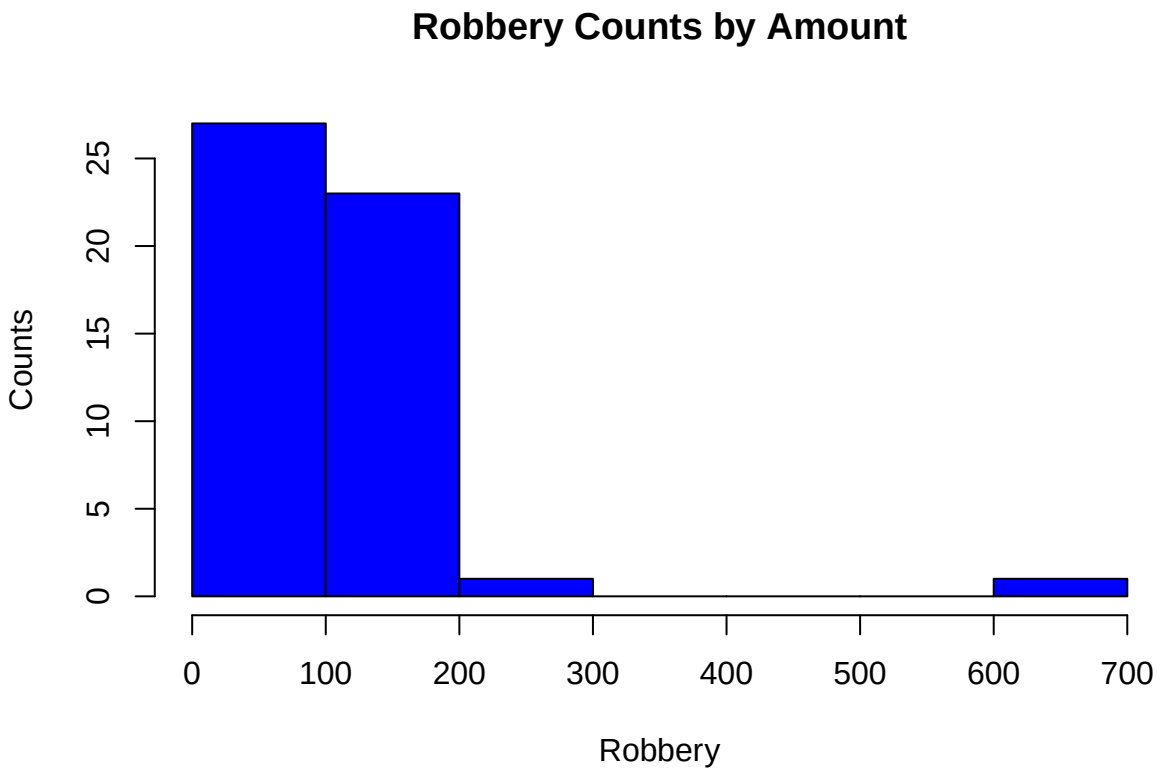
```
##            state murder forcible_rape robbery aggravated_assault burglary
## 1 United States     5.6          31.7   140.7              291.1    726.7
## 2       Alabama     8.2          34.3   141.4              247.8    953.8
## 3        Alaska     4.8          81.1    80.9              465.1    622.5
## 4       Arizona     7.5          33.8   144.4              327.4    948.4
## 5       Arkansas    6.7          42.9    91.1              386.8   1084.6
##   larceny_theft motor_vehicle_theft
## 1        2286.3               416.7
## 2        2650.0               288.3
## 3        2599.1               391.0
## 4        2965.2               924.4
## 5        2711.2               262.1
```

```
df_education<-read.csv("education.csv")
head(df_education,5)
```

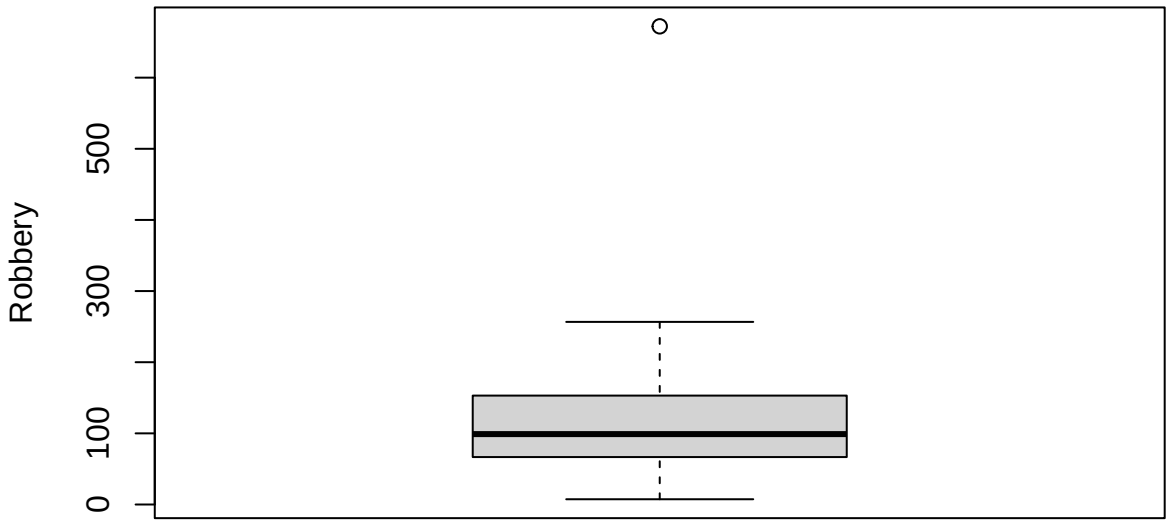
```
##           state reading math writing percent_graduates_sat pupil_staff_ratio
## 1 United States     501  515     493                    46              7.9
## 2       Alabama     557  552     549                     7              6.7
```

```
## 3        Alaska     520  516     492                  46              7.9
## 4       Arizona     516  521     497                  26             10.4
## 5      Arkansas     572  572     556                   5              6.8
##   dropout_rate
## 1          4.4
## 2          2.3
## 3          7.3
## 4          7.6
## 5          4.6
```

```
hist(df_crime$robbery,main="Robbery Counts by Amount",xlab="Robbery",
      ylab="Counts",
      col="blue",
      freq=TRUE)
```




```
options(warn=-1)
crime <- subset(df_crime, select = -c(state))
boxplot(x=crime$robbery,data=crime,xlab="Frequency",ylab="Robbery",main="Box Plot")
```

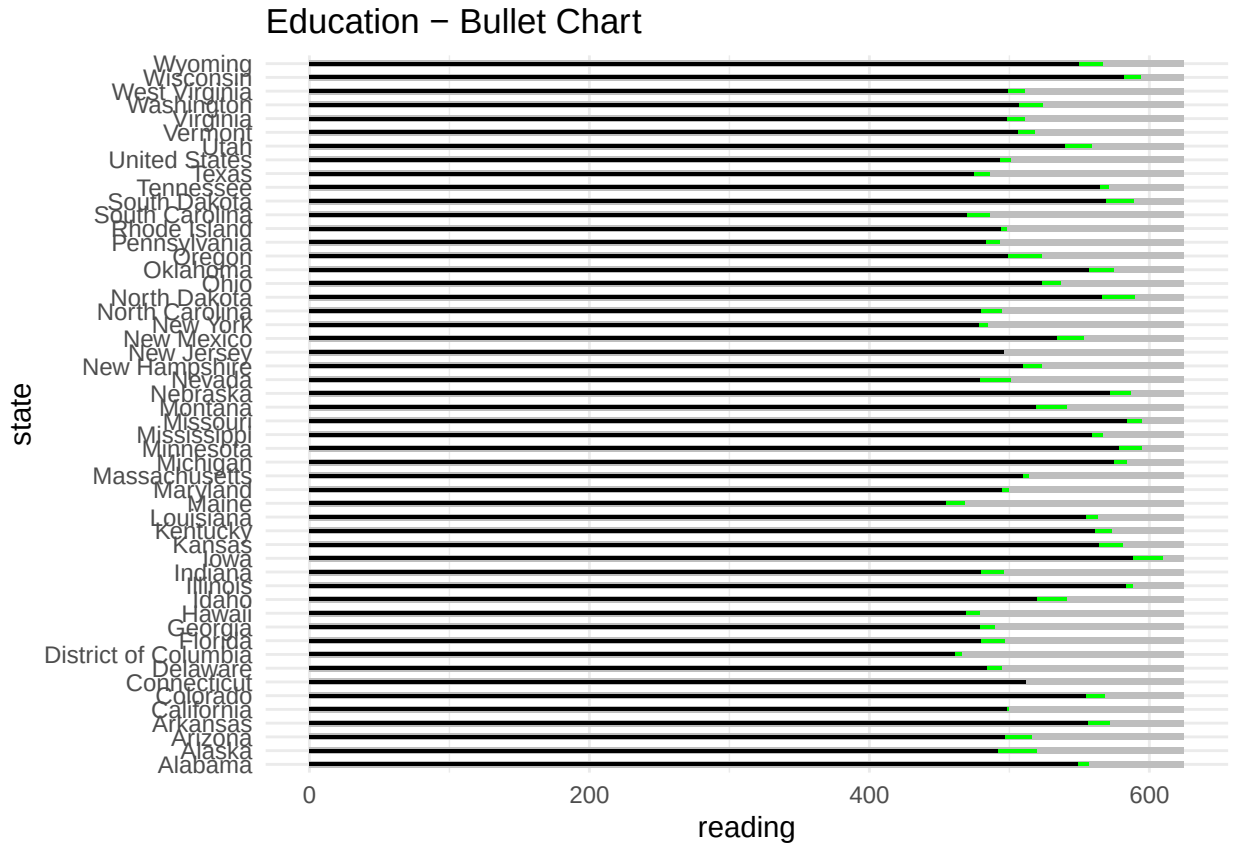


Frequency

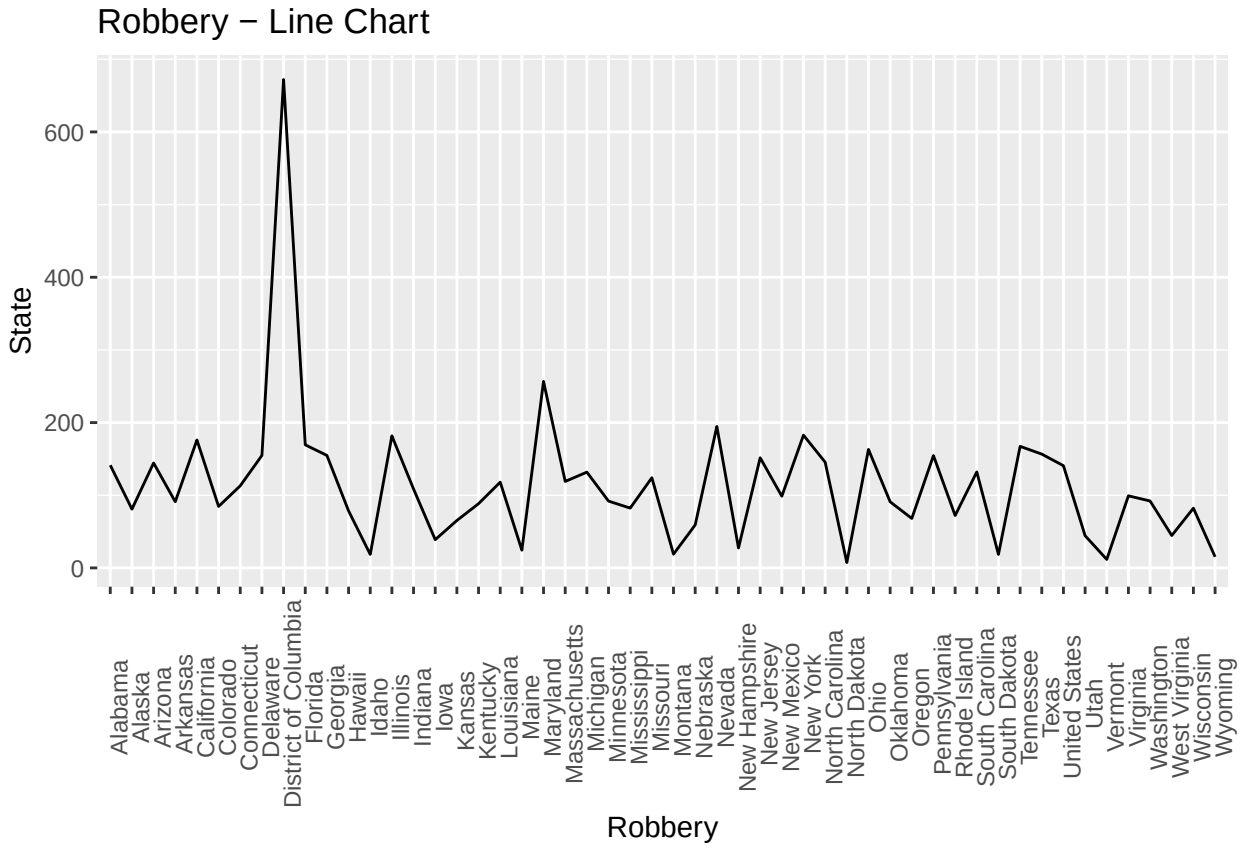
```
tibble(
  name = "R Bullet Chart",
  quant_value = 550,
  qualitative = 600
)
```

```
## # A tibble: 1 x 3
##   name           quant_value qualitative
##   <chr>                <dbl>       <dbl>
## 1 R Bullet Chart         550         600
```

```
df_education %>%
  ggplot(aes(x = reading, y =  state)) +
  geom_col(width = 0.5, aes(x = 625), fill = "grey") +
  geom_col(width = 0.25,aes(x = reading), fill = "green") +
  geom_col(aes(x = writing),fill = "black",color = NA,width = 0.25) +
  theme_minimal() +
  labs(title = "Education - Bullet Chart")
```




```
crime <- df_crime[,c("state","robbery")]
crime <- crime[!(crime$state=='United States'),]
p<-ggplot(crime,aes(x=state,y=robbery,group=1))+geom_line()+ggtitle("Robbery - Line Chart") +
  xlab("Robbery") +
  ylab("State")+theme(axis.text.x = element_text(angle = 90))
p
```


Robbery − Line Chart
State
600
400
200
0
Alabama
Alaska
Arizona
Arkansas
California
Colorado
Connecticut
Delaware
District of Columbia
Florida
Georgia
Hawaii
Idaho
Illinois
Indiana
Iowa
Kansas
Kentucky
Louisiana
Maine
Maryland
Massachusetts
Michigan
Minnesota
Mississippi
Missouri
Montana
Nebraska
Nevada
New Hampshire
New Jersey
New Mexico
New York
North Carolina
North Dakota
Ohio
Oklahoma
Oregon
Pennsylvania
Rhode Island
South Carolina
South Dakota
Tennessee
Texas
United States
Utah
Vermont
Virginia
Washington
West Virginia
Wisconsin
Wyoming
Robbery