

Data Visualizations With

R Programming

Aim:- Our aim is to do some data visualizations on different datasets like Mtcars, Air Quality, and more.

Tool Used:- RStudio.

Programming Language Used:- R Programming.

Datasets Used:- Mtcars, Air Quality and more.

Knowledge Required:-

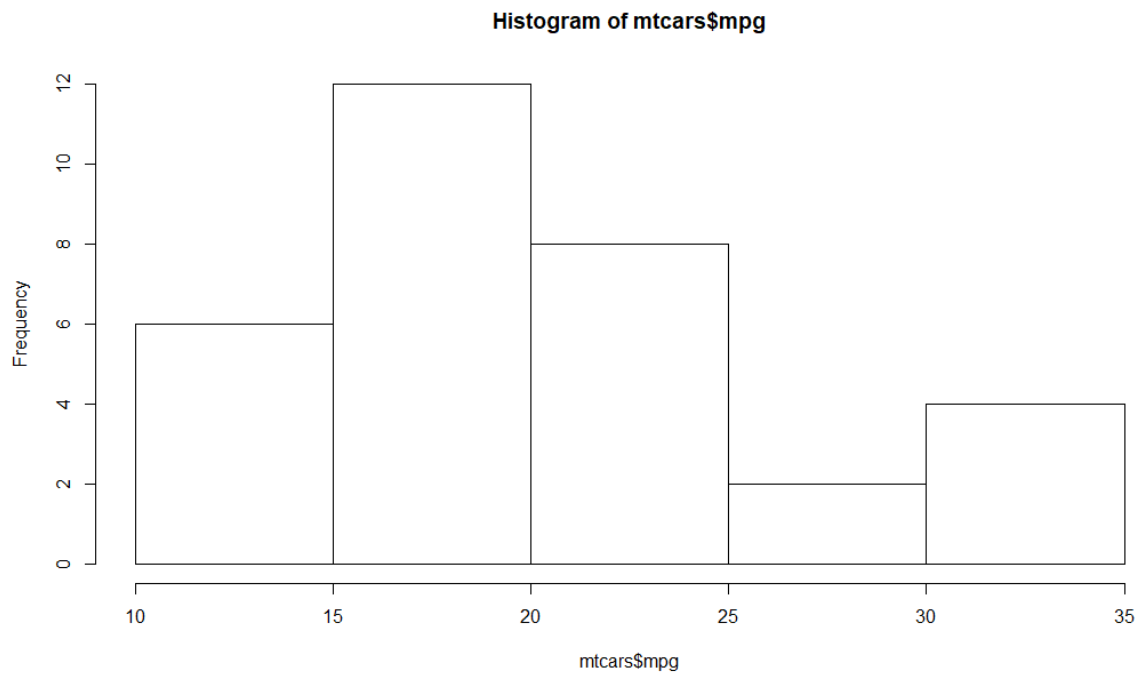
- Data visualization knowledge required.
- R Programming knowledge required.
- How to use the tool “RStudio” knowledge required.

This Project Contains The Following Data Visualizations:-

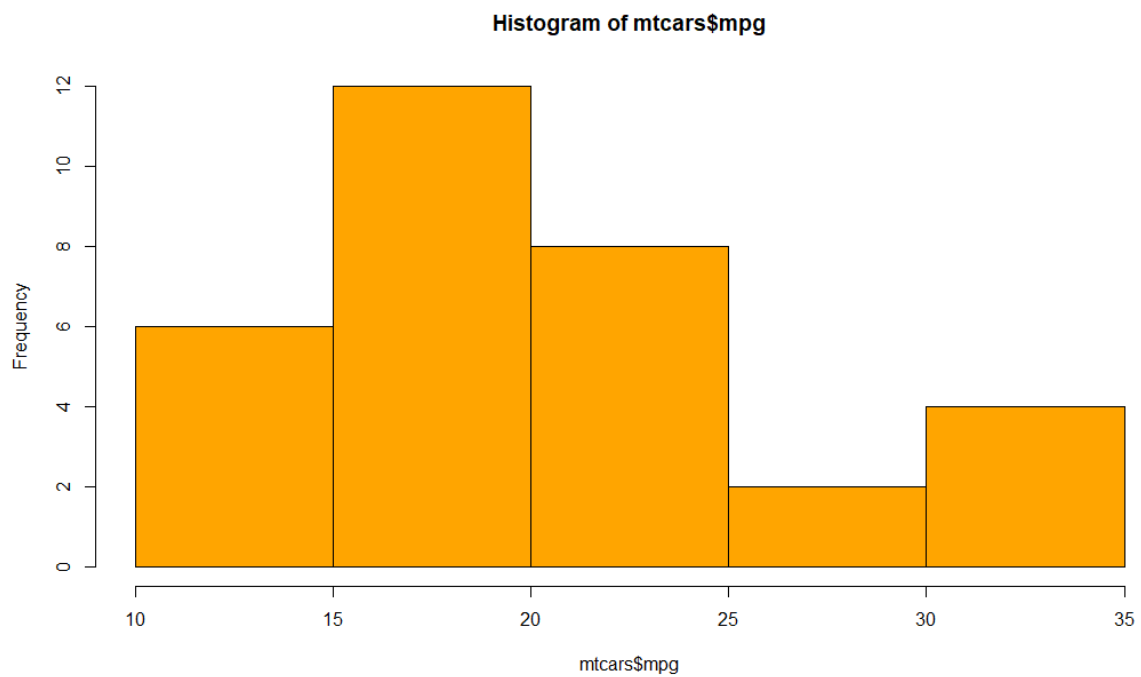
- Histogram
- Density Plot
- Line Chart
- Box Plot
- Heat Map

Results:-

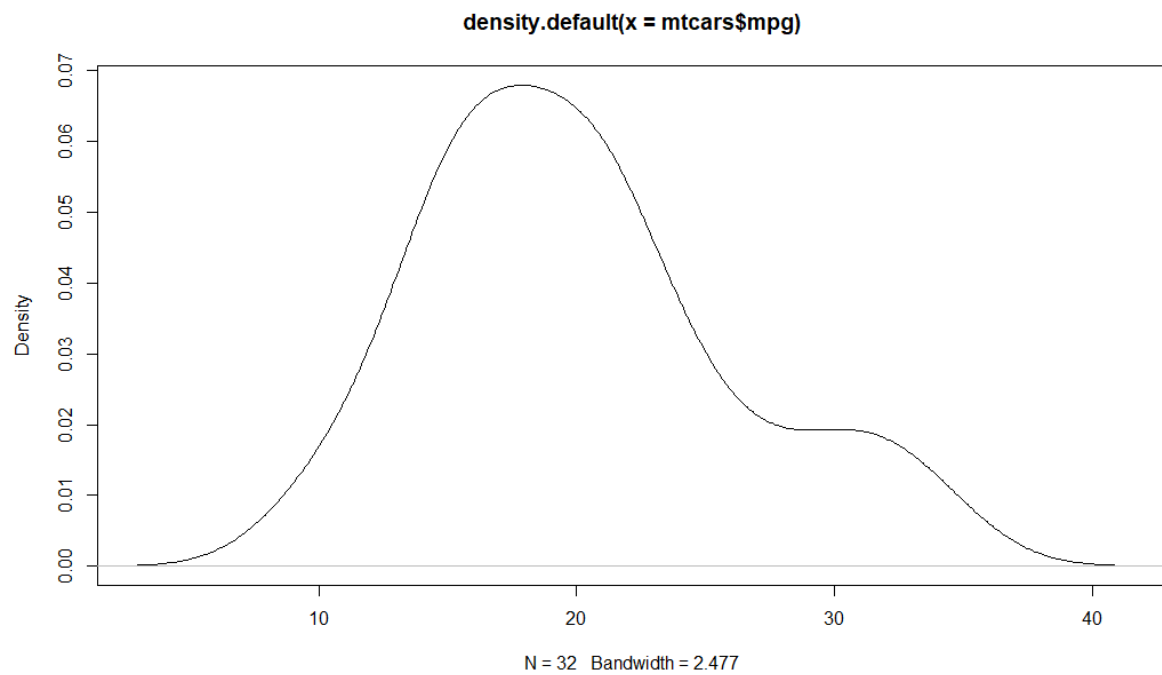
Histogram 1:-



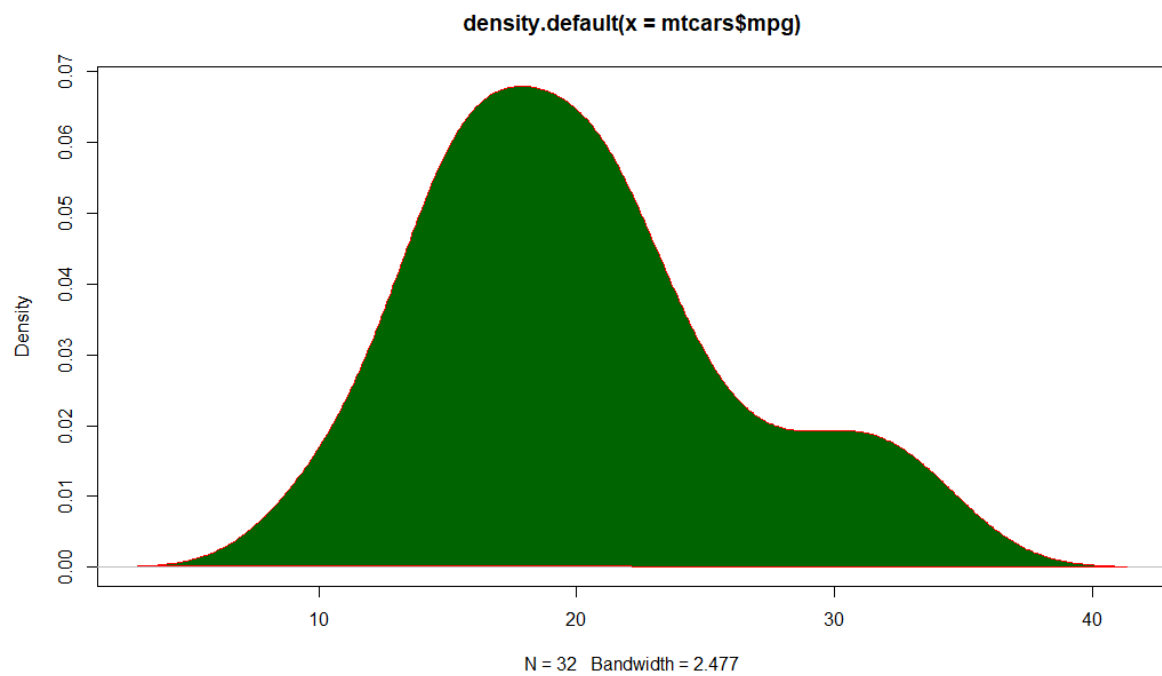
Histogram 2:-



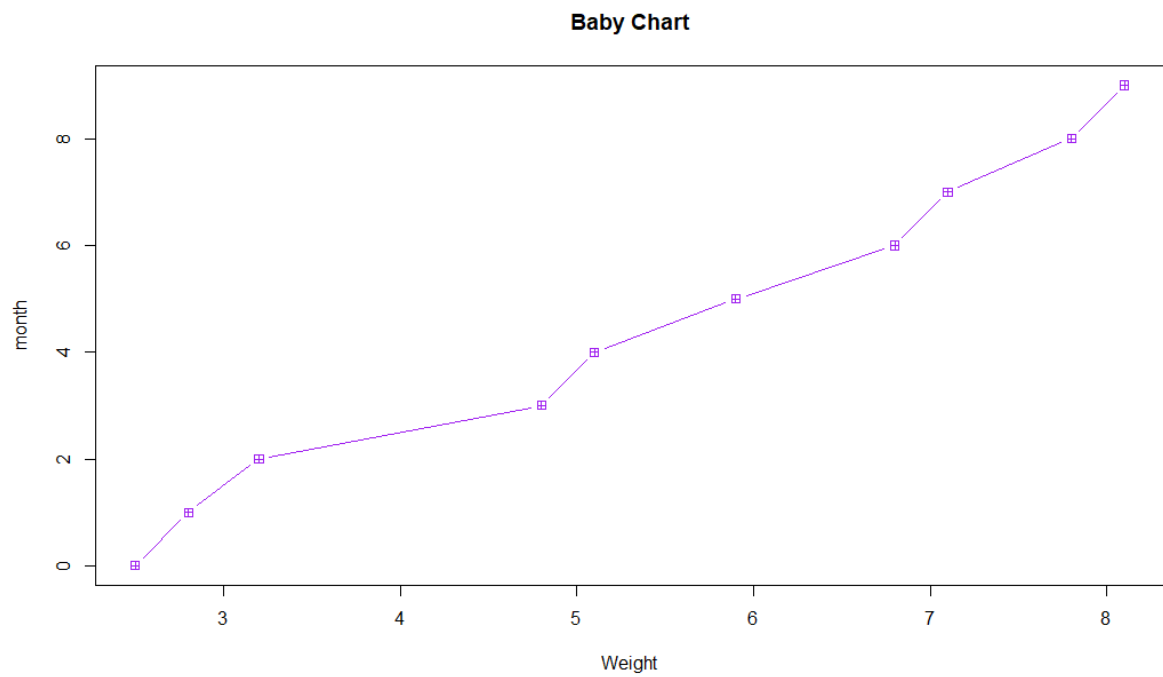
Density Plot 1:-



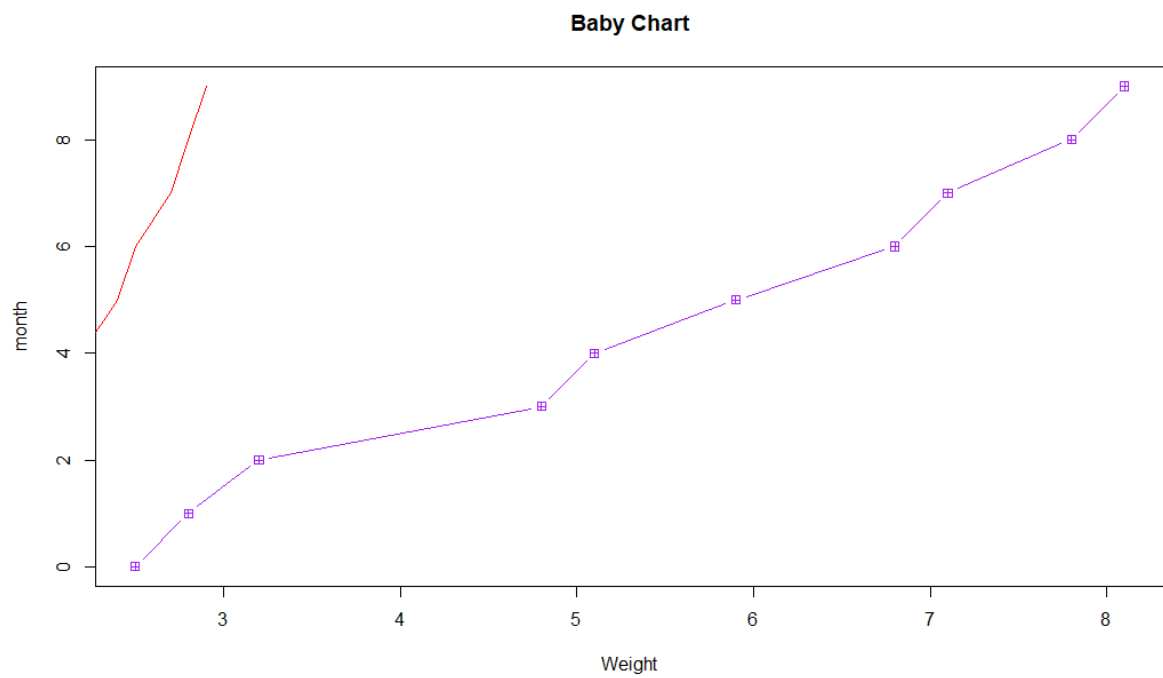
Density Plot 2:-



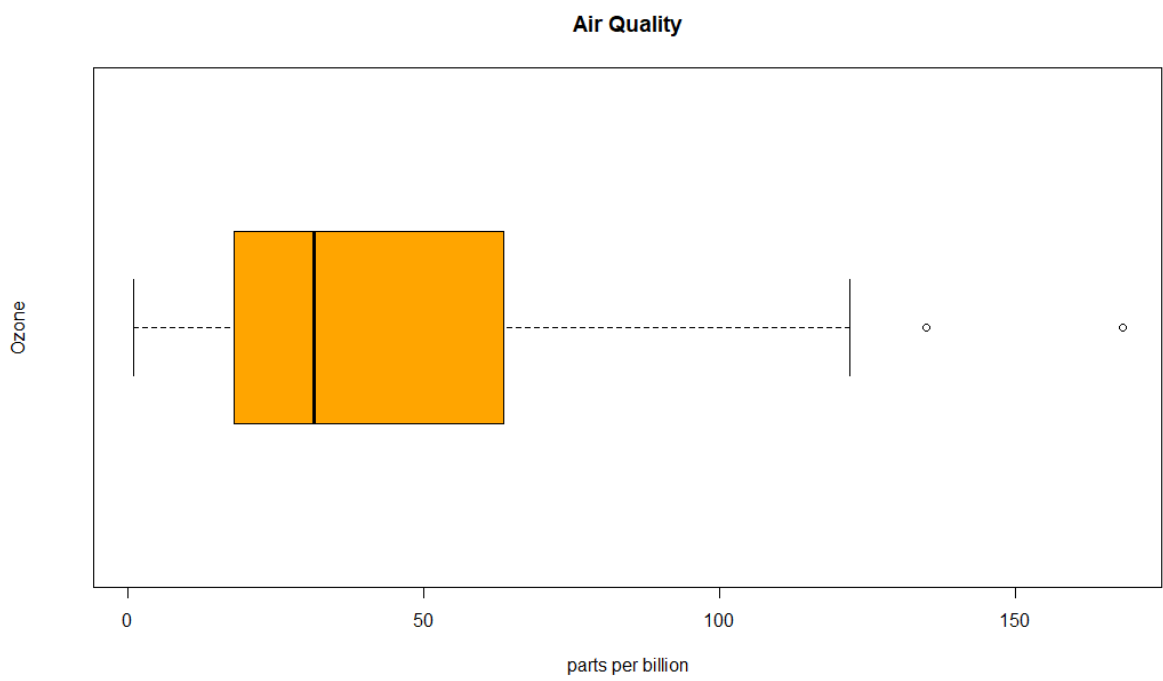
Line Chart 1:-



Line Chart 2:-



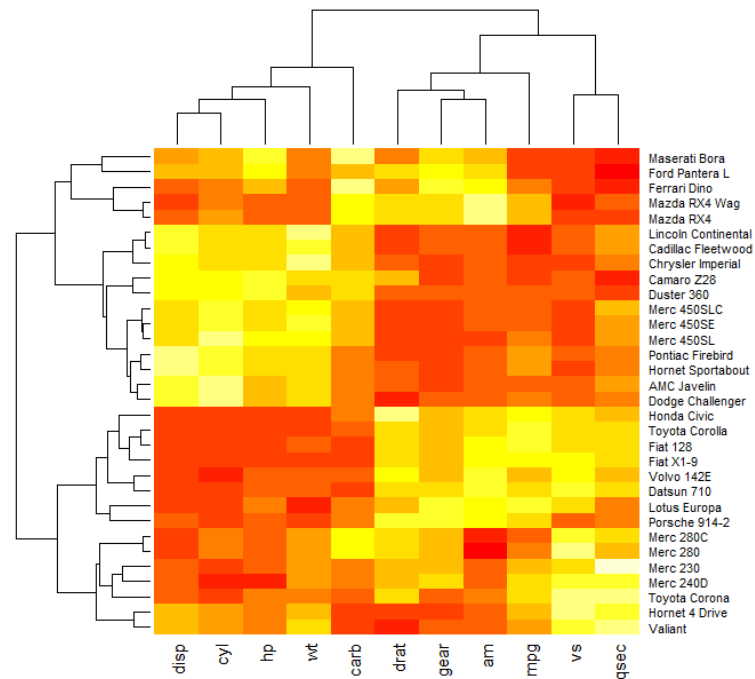
Box Plot 1:-



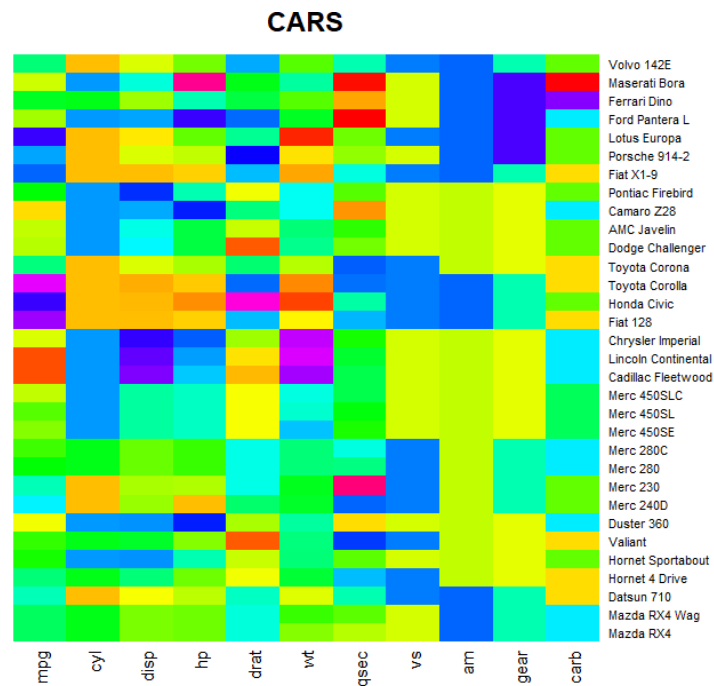
Box Plot 2:-



Heat Map 1:-



Heat Map 2:-



Source Code:-

Note: Text in “red” are comments.

#Histogram

?mtcars #gives details of every columns

?hist

View(mtcars)

data(mtcars)

hist(mtcars\$mpg)

hist(mtcars\$mpg, breaks = 5, col = "Orange", border = "Black")

#Density plot

density_data<-density(mtcars\$mpg)

density_data

plot(density_data)

#add color to the plot

polygon(density_data, col = "Dark Green", border = "Red")

colors() #gives code for every color

#Line Chart

Weight<-c(2.5, 2.8, 3.2, 4.8, 5.1,5.9,6.8,7.1,7.8,8.1)

height<-c(1.6,1.8,2.0,2.1,2.2,2.4,2.5,2.7,2.8,2.9)

month<- c(0,1,2,3,4,5,6,7,8,9)

plot(Weight, month, type = "b", main = "Baby Chart", pch=12, col = "Purple")

lines(height, month, type= "l", pch=5, col = "Red")

#BOX PLOT

data(airquality)

View(airquality)

?airquality

#check the range of the data

```
sort(unique(airquality$Ozone))  
boxplot(airquality$Ozone, main = "Air Quality",  
        xlab="parts per billion", ylab="Ozone",  
        horizontal = TRUE, col = "Orange")  
boxplot(airquality$Ozone, main = "Air Quality",  
        xlab="parts per billion", ylab="Ozone",  
        horizontal = FALSE, col = "Orange")
```

```
summary(airquality)  
str(airquality$Ozone)  
?boxplot  
?str
```

#Heat Map

```
?scale  
df= scale(mtcars)  
View(df)  
heatmap(df)  
heatmap(df, scale = "column", col=rainbow(256), main = "CARS",  
        Rowv = NA, Colv = NA)
```

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