BA64036_Assignment1

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Introduction

The purpose of this assignment is to set up and use the tools for this course.

Instructions

1. Install the ISLR library using the install.packages() command. Call the library using the library(ISLR) command to ensure that the library is correctly installed (10% of total points)

Calling Installed Library

```
# If i use install.packages() command rmd file is failing to knit.
# so, i've removed install.packages() command

library(ISLR) # Using Library to call installed ISLR library
```

2. Create a new R-Notebook (.Rmd) file. In the first code chunk, call the ISLR library and then print the summary of the Carseats dataset. How many observations (rows) this dataset contains? (15% of total points)

Using Careseats Dataset

```
summary(Carseats) # Using Summary function to get descriptive statistics of Carseats dataset
```

```
##      Sales          CompPrice       Income        Advertising
##  Min.   : 0.000   Min.   : 77   Min.   : 21.00   Min.   : 0.000
##  1st Qu.: 5.390   1st Qu.:115   1st Qu.: 42.75   1st Qu.: 0.000
##  Median : 7.490   Median :125   Median : 69.00   Median : 5.000
##  Mean   : 7.496   Mean   :125   Mean   : 68.66   Mean   : 6.635
##  3rd Qu.: 9.320   3rd Qu.:135   3rd Qu.: 91.00   3rd Qu.:12.000
##  Max.   :16.270   Max.   :175   Max.   :120.00   Max.   :29.000
##    Population        Price        ShelveLoc        Age          Education
##  Min.   : 10.0   Min.   : 24.0   Bad   : 96   Min.   :25.00   Min.   :10.0
##  1st Qu.:139.0   1st Qu.:100.0   Good  : 85   1st Qu.:39.75   1st Qu.:12.0
##  Median :272.0   Median :117.0   Medium:219   Median :54.50   Median :14.0
##  Mean   :264.8   Mean   :115.8                Mean   :53.32   Mean   :13.9
##  3rd Qu.:398.5   3rd Qu.:131.0                3rd Qu.:66.00   3rd Qu.:16.0
##  Max.   :509.0   Max.   :191.0                Max.   :80.00   Max.   :18.0
##  Urban       US
```

```
##  No :118   No :142
##  Yes:282   Yes:258
##
##
##
##
```

No.of Observations in carseats dataset

```
nrow(Carseats) # Using nrow function to get no of rows in Carsearts dataset
```

```
## [1] 400
```

3. Using the summary statistics shown above, what is maximum value of the advertising attribute? (15% of total points)

Maximum Values of the advertising

```
max(Carseats$Advertising) # Using max function to get maximum value of advertising
```

```
## [1] 29
```

4. Calculate the IQR of the Price attribute. (15% of total points)

IQR for Price

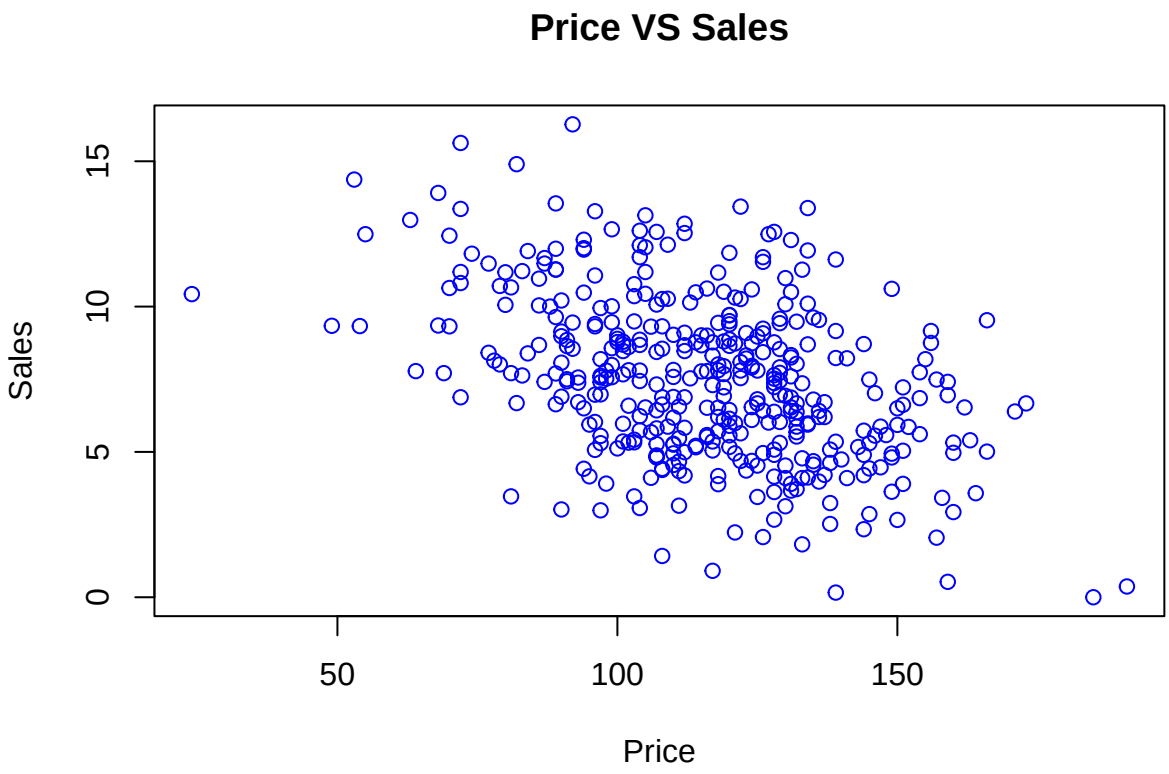
```
IQR(Carseats$Price) # Using IQR function to get Interquartile Range for Price
```

```
## [1] 31
```

5. Plot the Sales against Price. What do you see in there? Calculate the correlation of the two attributes. What does the sign of the correlation coefficient suggest? (15% of total points)

Plotting Sales againt Price

```
# Using plot function to get scatterplot for Price againt Sales
plot(Carseats$Price, Carseats$Sales, xlab = "Price", ylab = "Sales", main = "Price VS Sales", col = "Blu
```



Correlation coefficient for price and sales

```
cor(Carseats$Price, Carseats$Sales) # Using cor function to Price and Sales correlation
```

```
## [1] -0.4449507
```