

Car Seats Data Analysis

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```
install.packages("ISLR")
```

01. Load ISLR and get the Data set

```
library("ISLR")  
data("Carseats")
```

02. Summary of Data set

```
library("ISLR")  
summary(Carseats)
```

##	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  
##  
##  
##  
##  
  
nrows <- nrow(Carseats)  
print(paste("Number of rows:",nrows))  
  
## [1] "Number of rows: 400"
```

03. Find the maximum value of Advertising

```
M <- max(Carseats$Advertising, na.rm = TRUE)
print(paste("Maximum value of Advertising:", M))

## [1] "Maximum value of Advertising: 29"
```

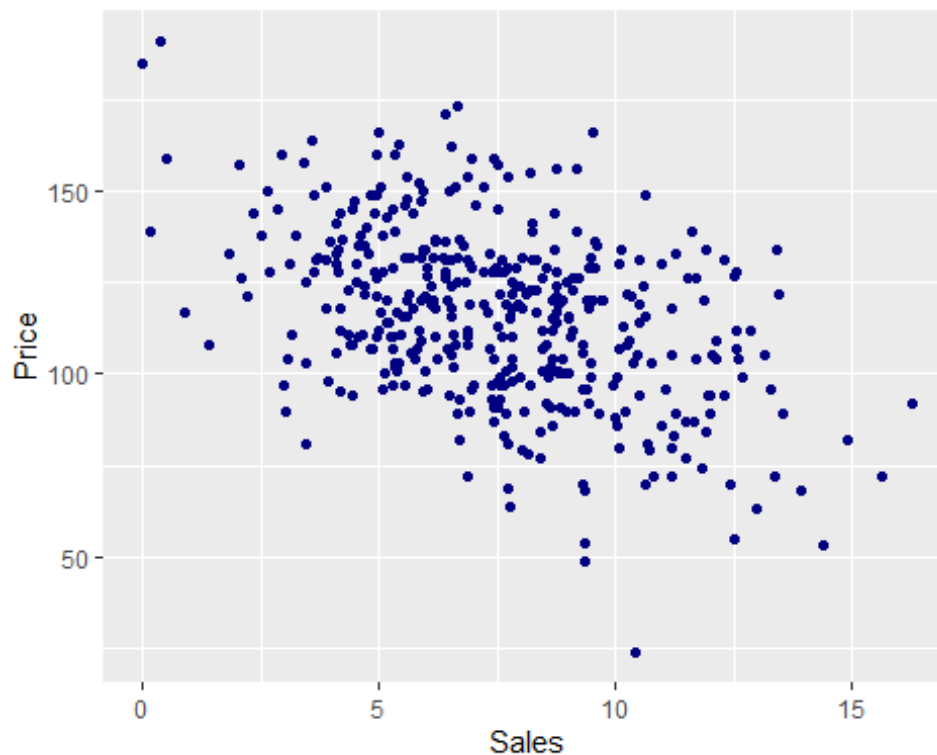
04. Calculate IQR

```
I <- IQR(Carseats$Price)
print(paste("IQR of price:", I))

## [1] "IQR of price: 31"
```

05. Plot Sales and Price data

```
library(ggplot2)
ggplot()+geom_point(data=Carseats, mapping = aes(x=Sales,
y=Price), color="navy")
```



```
correlation <- cor(Carseats$Sales, Carseats$Price)
print(correlation)

## [1] -0.4449507
```

#According to the correlation value there is a moderate negative relationship between sales and the price of car seats. The negative correlation value

indicates that the price of Car Seats and Sales of Car Seats have a negative relationship. Simply it means when the price of Car Seats increases, the Sales of Car Seats go down. It is important to note that correlation value does not indicate causation.