FML_Assignment

2023-09-09

#Importing dataset by giving the path

```
library("readxl")
credit <- read.csv("C:/Users/jhans/OneDrive/Documents/FML/credit_data.csv")
View(credit)
```

#Descriptive statistics for selection of quantitative and categorical variables

```
summary(credit)
```

```
##       Age           Gender              Income        Credit.Score
##  Min.   :18.00   Length:279856      Min.   :  9000   Min.   :300
##  1st Qu.:31.00   Class :character   1st Qu.: 42000   1st Qu.:446
##  Median :44.00   Mode  :character   Median : 68000   Median :584
##  Mean   :44.01                      Mean   : 76499   Mean   :583
##  3rd Qu.:57.00                      3rd Qu.:104000   3rd Qu.:722
##  Max.   :70.00                      Max.   :209000   Max.   :850
##  Credit.History.Length Number.of.Existing.Loans  Loan.Amount
##  Min.   :  6           Min.   : 0.000           Min.   :  5294
##  1st Qu.:156           1st Qu.: 2.000           1st Qu.: 72173
##  Median :307           Median : 5.000           Median :111263
##  Mean   :308           Mean   : 4.702           Mean   :105795
##  3rd Qu.:460           3rd Qu.: 7.000           3rd Qu.:150000
##  Max.   :611           Max.   :10.000           Max.   :150000
##   Loan.Tenure    Existing.Customer     State               City
##  Min.   : 12.0   Length:279856      Length:279856      Length:279856
##  1st Qu.: 62.0   Class :character   Class :character   Class :character
##  Median :100.0   Mode  :character   Mode  :character   Mode  :character
##  Mean   :133.3
##  3rd Qu.:201.0
##  Max.   :359.0
##    LTV.Ratio     Employment.Profile Profile.Score     Occupation
##  Min.   :40.00   Length:279856      Min.   :  0.00   Length:279856
##  1st Qu.:58.11   Class :character   1st Qu.: 61.00   Class :character
##  Median :72.13   Mode  :character   Median : 89.00   Mode  :character
##  Mean   :71.64                      Mean   : 77.35
##  3rd Qu.:86.24                      3rd Qu.: 98.00
##  Max.   :95.00                      Max.   :100.00
```

```
sd(credit$Number.of.Existing.Loans)
```

```
## [1] 2.980351
```

```r
var(credit$Age)
```

```
## [1] 234.4283
```

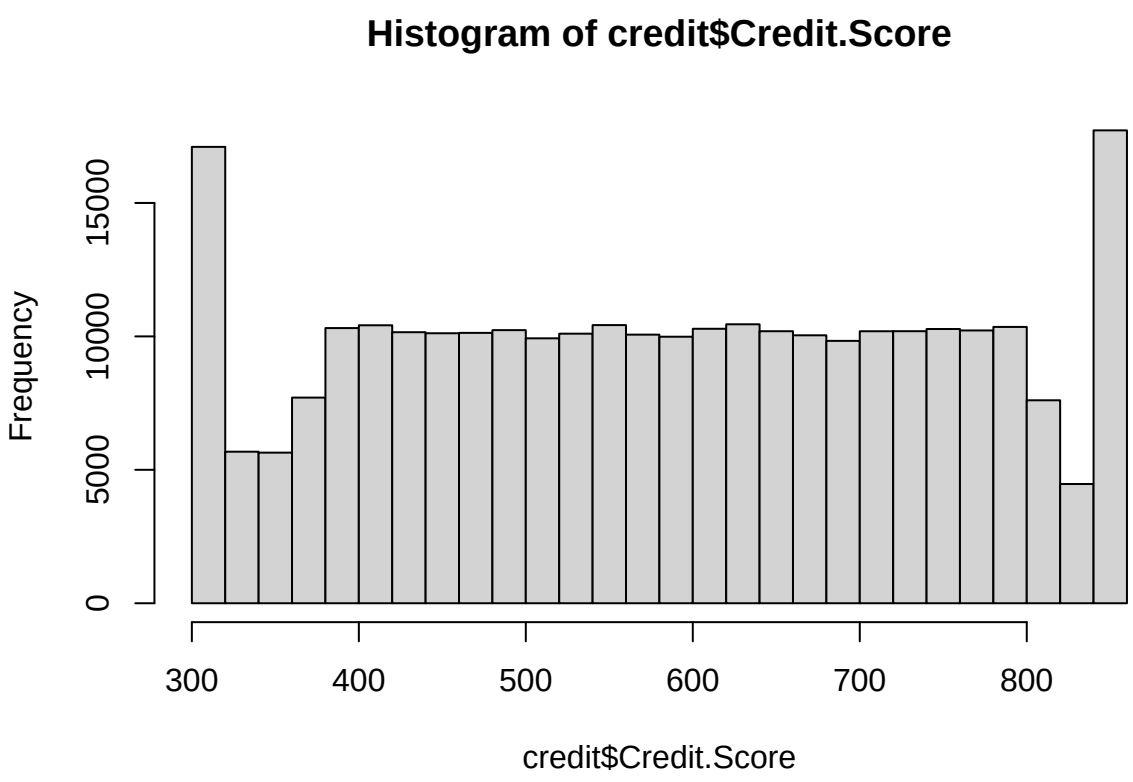
#Transform at least one variable

```r
credit$Loan.Tenure<-(credit$Loan.Tenure+1.5)
summary(credit)
```

```
##       Age            Gender              Income        Credit.Score
##  Min.   :18.00   Length:279856      Min.   :  9000   Min.   :300
##  1st Qu.:31.00   Class :character   1st Qu.: 42000   1st Qu.:446
##  Median :44.00   Mode  :character   Median : 68000   Median :584
##  Mean   :44.01                      Mean   : 76499   Mean   :583
##  3rd Qu.:57.00                      3rd Qu.:104000   3rd Qu.:722
##  Max.   :70.00                      Max.   :209000   Max.   :850
##  Credit.History.Length Number.of.Existing.Loans  Loan.Amount
##  Min.   :  6           Min.   : 0.000           Min.   :  5294
##  1st Qu.:156           1st Qu.: 2.000           1st Qu.: 72173
##  Median :307           Median : 5.000           Median :111263
##  Mean   :308           Mean   : 4.702           Mean   :105795
##  3rd Qu.:460           3rd Qu.: 7.000           3rd Qu.:150000
##  Max.   :611           Max.   :10.000           Max.   :150000
##   Loan.Tenure    Existing.Customer     State               City
##  Min.   : 13.5   Length:279856      Length:279856      Length:279856
##  1st Qu.: 63.5   Class :character   Class :character   Class :character
##  Median :101.5   Mode  :character   Mode  :character   Mode  :character
##  Mean   :134.8
##  3rd Qu.:202.5
##  Max.   :360.5
##    LTV.Ratio     Employment.Profile Profile.Score     Occupation
##  Min.   :40.00   Length:279856      Min.   :  0.00   Length:279856
##  1st Qu.:58.11   Class :character   1st Qu.: 61.00   Class :character
##  Median :72.13   Mode  :character   Median : 89.00   Mode  :character
##  Mean   :71.64                      Mean   : 77.35
##  3rd Qu.:86.24                      3rd Qu.: 98.00
##  Max.   :95.00                      Max.   :100.00
```

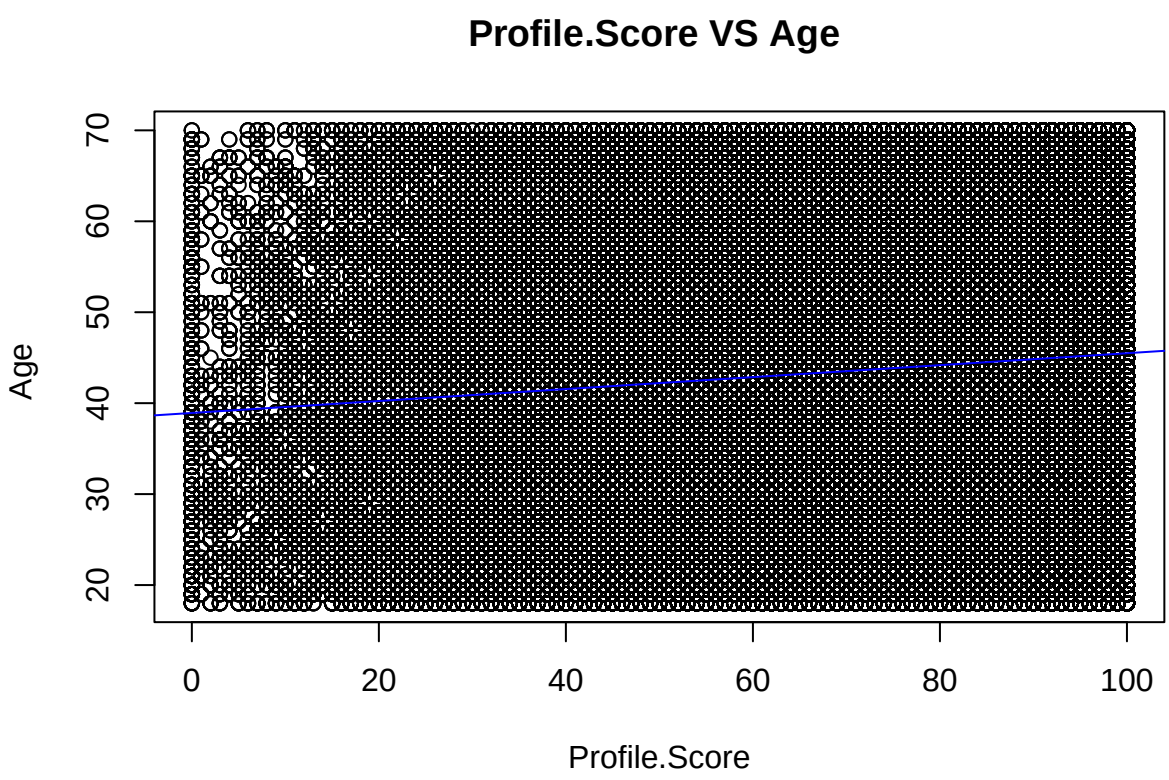
#one quantitative variable

```r
hist(credit$Credit.Score)
```



#one scatterplot

```
x<-(credit$Profile.Score)
y<-(credit$Age)
# Corrected code
plot(x, y, main = "Profile.Score VS Age ", xlab = "Profile.Score", ylab = "Age ")
abline(lm(y ~ x), col = "blue")
```


Profile.Score VS Age
Age
20
30
40
50
60
70
0
20
40
60
80
100
Profile.Score