Iris Linear Regression

```
library(datasets)
data(iris)
summary(iris)
```

```
##   Sepal.Length    Sepal.Width     Petal.Length    Petal.Width
##  Min.   :4.300   Min.   :2.000   Min.   :1.000   Min.   :0.100
##  1st Qu.:5.100   1st Qu.:2.800   1st Qu.:1.600   1st Qu.:0.300
##  Median :5.800   Median :3.000   Median :4.350   Median :1.300
##  Mean   :5.843   Mean   :3.057   Mean   :3.758   Mean   :1.199
##  3rd Qu.:6.400   3rd Qu.:3.300   3rd Qu.:5.100   3rd Qu.:1.800
##  Max.   :7.900   Max.   :4.400   Max.   :6.900   Max.   :2.500
##        Species
##  setosa    :50
##  versicolor:50
##  virginica :50
##
##
##
```

```
Y <- iris[, 'Sepal.Length']
X <- iris[, 'Sepal.Width']
```

```
mean(Y)
```

```
## [1] 5.843333
```

```
mean(X)
```

```
## [1] 3.057333
```

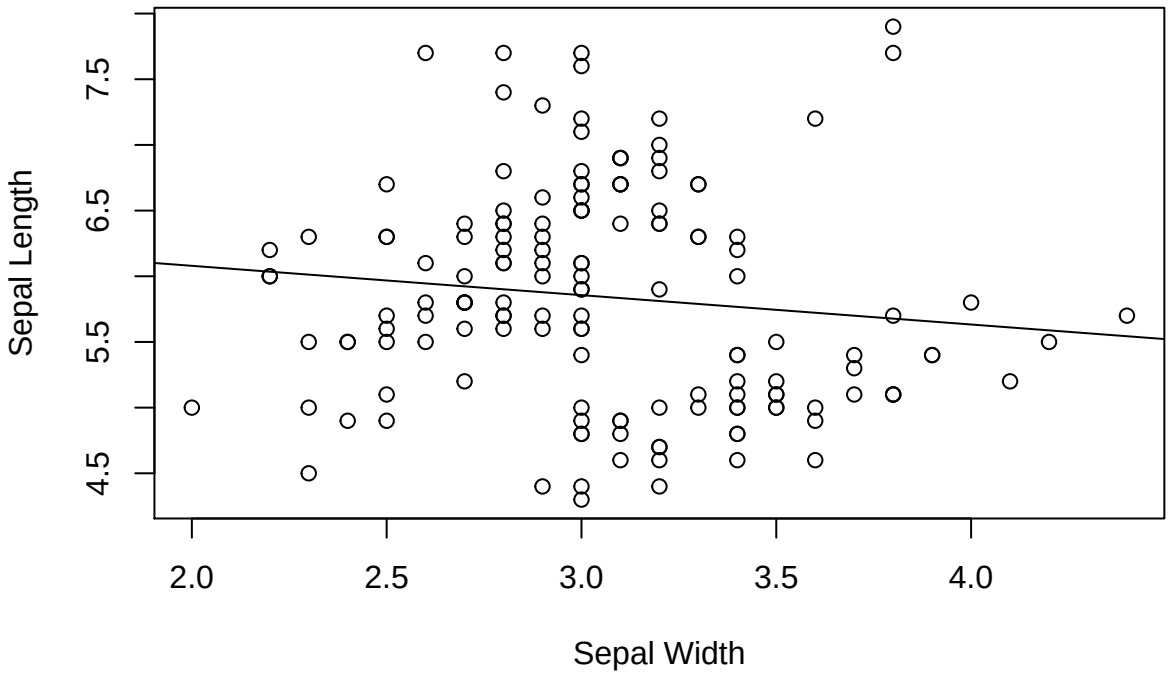
```
cor(Y, X)
```

```
## [1] -0.1175698
```

```
model <- lm(Y ~ X)
model
```

```
##
## Call:
## lm(formula = Y ~ X)
##
## Coefficients:
## (Intercept)            X
##      6.5262      -0.2234
```

```
plot(Y ~ X, xlab = 'Sepal Width', ylab = 'Sepal Length')
abline(model)
```


Sepal Length
4.5
5.5
6.5
7.5
2.0
2.5
3.0
3.5
4.0
Sepal Width