

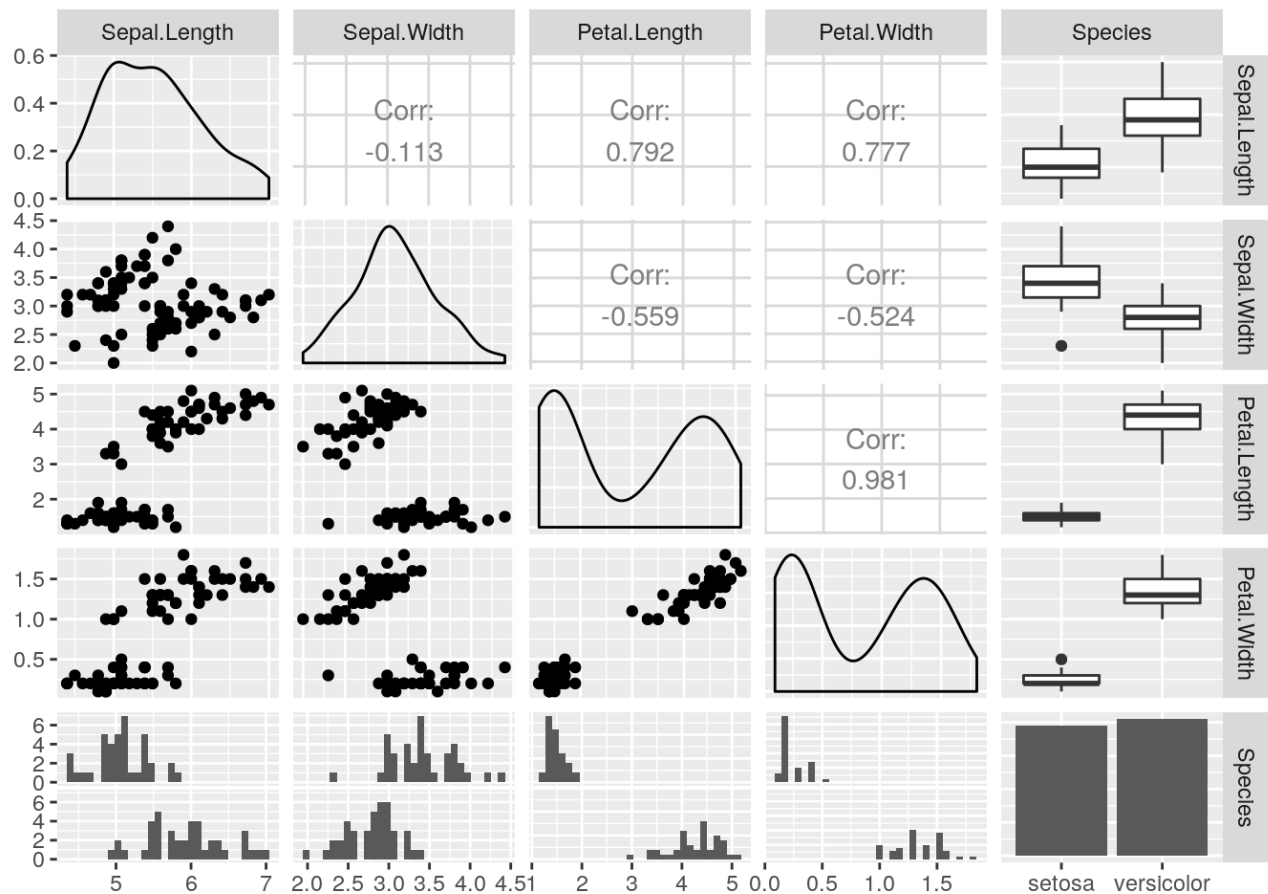
## LOGISTIC REGRESSION

```
library(datasets)
ir_data<- iris
head(ir_data)
```

```
## Sepal.Length Sepal.Width Petal.Length Petal.Width Species
## 1          5.1          3.5          1.4          0.2 setosa
## 2          4.9          3.0          1.4          0.2 setosa
## 3          4.7          3.2          1.3          0.2 setosa
## 4          4.6          3.1          1.5          0.2 setosa
## 5          5.0          3.6          1.4          0.2 setosa
## 6          5.4          3.9          1.7          0.4 setosa
```

```
set.seed(100)
samp<-sample(1:100,80)
ir_test<-ir_data[samp,]
ir_ctrl<-ir_data[-samp,]
#install.packages("GGally")
#install.packages("ggplot2")
library(ggplot2)
library(GGally)
ggpairs(ir_test)
```

```
## `stat_bin()` using `bins = 30`. Pick better value with `binwidth`.
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```



```

y<-ir_test$Species
x<-ir_test$Sepal.Length
glfit<-glm(y~x, family = 'binomial')
newdata<- data.frame(x=ir_ctrl$Sepal.Length)
predicted_val<-predict(glfit, newdata, type="response")
prediction<-data.frame(ir_ctrl$Sepal.Length, ir_ctrl$Species,predicted_val)

```

```

qplot(prediction[,1], round(prediction[,3]), col=prediction[,2], xlab = 'Sepal
Length', ylab = 'Prediction using Logistic Reg.')

```

