

Iris.R

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```
# Iris.R
# Correlation for Iris data

# Load necessary libraries
library(Hmisc)

## Loading required package: lattice
## Loading required package: survival
## Loading required package: Formula
## Loading required package: ggplot2

##
## Attaching package: 'Hmisc'

## The following objects are masked from 'package:base':
##
##      format.pval, units

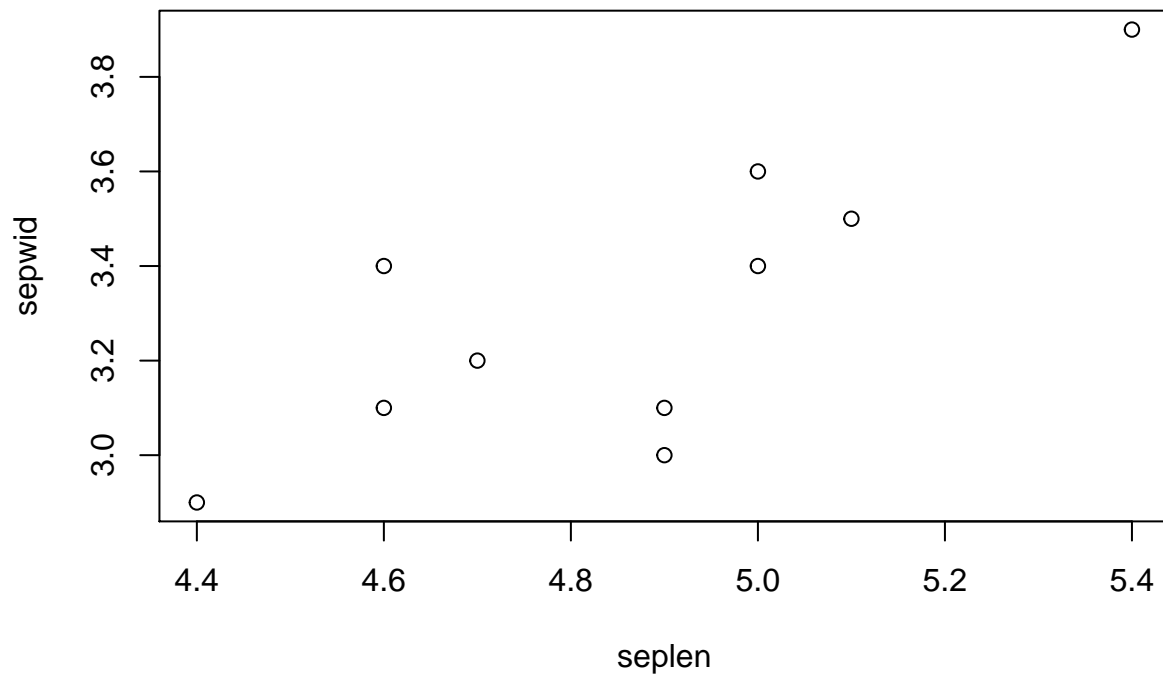
# Read in data set
irisdata <- read.table(header=T,colClasses=c("numeric","numeric"),text="
seplen sepwid
5.1 3.5
4.9 3.0
4.7 3.2
4.6 3.1
5.0 3.6
5.4 3.9
4.6 3.4
5.0 3.4
4.4 2.9
4.9 3.1
")

# Print data
irisdata

##      seplen sepwid
## 1      5.1      3.5
## 2      4.9      3.0
## 3      4.7      3.2
## 4      4.6      3.1
## 5      5.0      3.6
## 6      5.4      3.9
```

```
## 7      4.6      3.4
## 8      5.0      3.4
## 9      4.4      2.9
## 10     4.9      3.1
```

```
# Scatterplot matrix
plot(irisdata)
```



```
# Pearson correlation coefficients
# Convert data frame to matrix using as.matrix
rp <- rcorr(as.matrix(irisdata))
print(rp$r,digits=5)
```

```
##          seplen  sepwid
## seplen 1.00000 0.78721
## sepwid 0.78721 1.00000
```

```
print(rp$P,digits=5)
```

```
##          seplen  sepwid
## seplen      NA 0.0068767
## sepwid 0.0068767      NA
```

```
# Spearman correlation coefficients
rs <- rcorr(as.matrix(irisdata),type="spearman")
print(rs$r,digits=5)
```

```
##          seplen  sepwid
## seplen 1.00000 0.76308
```

```
## sepwid 0.76308 1.00000
```

```
print(rs$P,digits=5)
```

```
##          seplen  sepwid
```

```
## seplen      NA 0.010239
```

```
## sepwid 0.010239      NA
```