

# PAC2-MatrizPlot

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## R Markdown

This is an R Markdown document. Markdown is a simple formatting syntax for authoring HTML, PDF, and MS Word documents. For more details on using R Markdown see <http://rmarkdown.rstudio.com>.

When you click the **Knit** button a document will be generated that includes both content as well as the output of any embedded R code chunks within the document. You can embed an R code chunk like this:

```
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
##
##
##
```

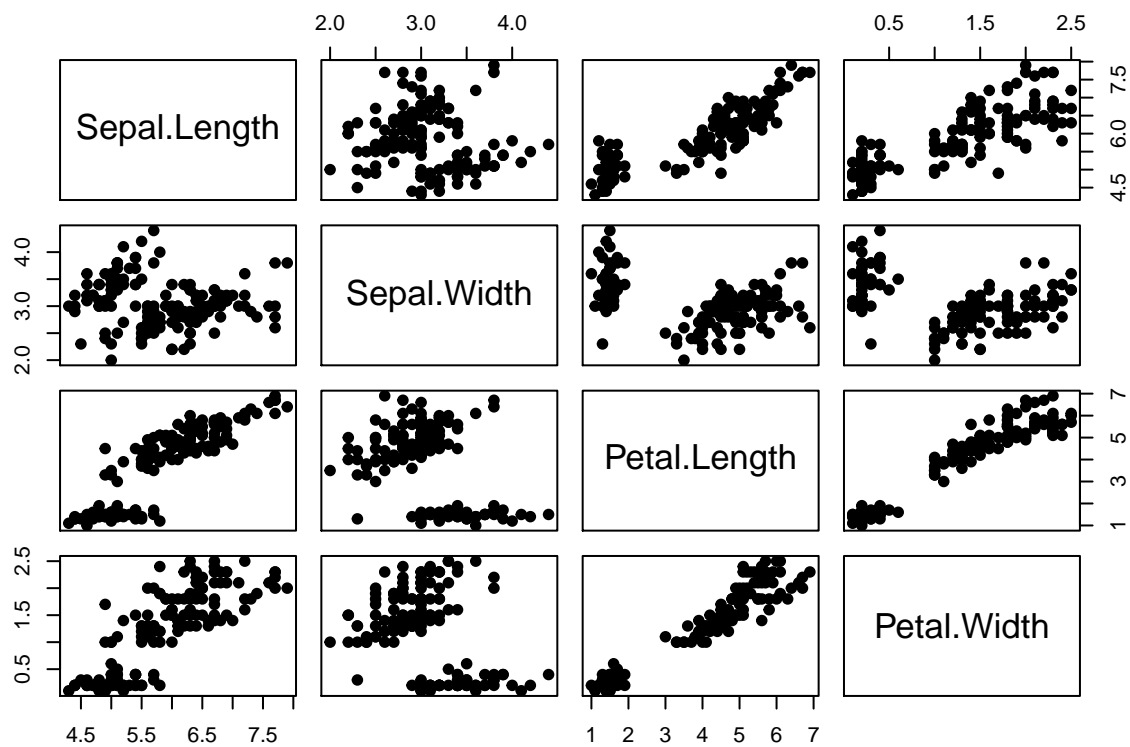
```
head(iris)
```

```
##      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
```

Anem a generar un matrix plot (array de scatter plots) per a veure la relació entre les 4 variable qualitatives (numèriques) Sepal.Length, Sepal.Width, Petal.Length, Petal.Width respecte a la variable categòrica specie.

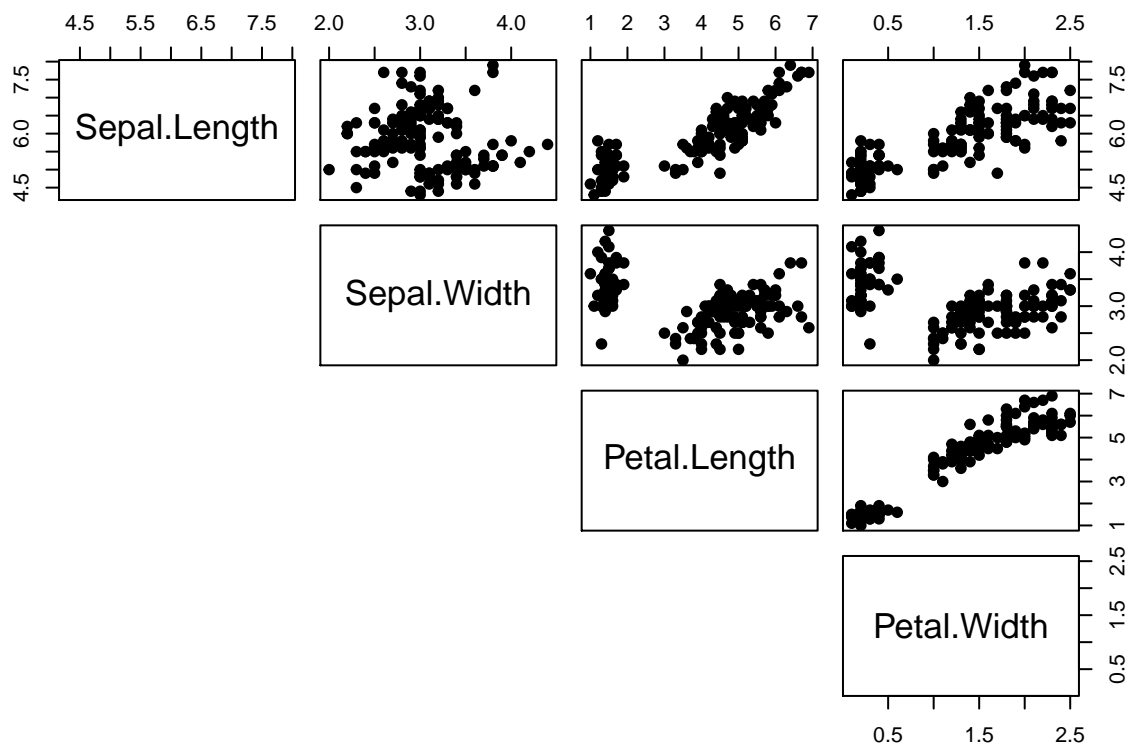
1.Matrix plot bàsica

```
pairs(iris[,1:4], pch = 19)
```



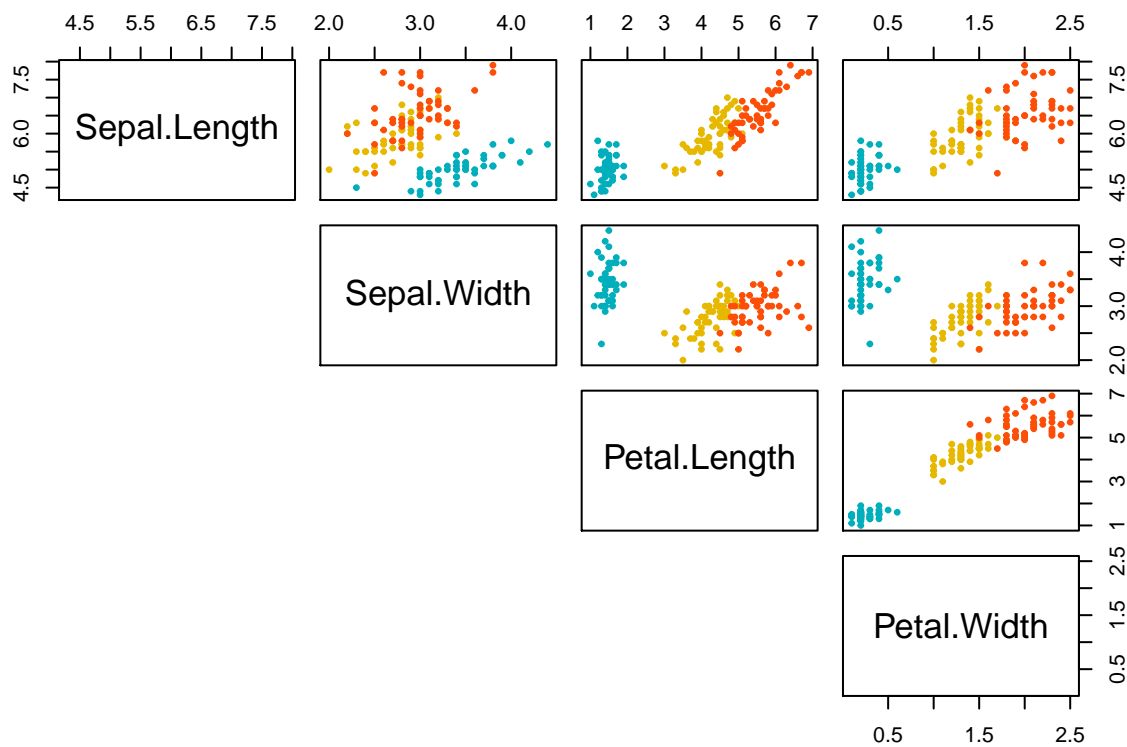
2.Matrix plot mostrant només el panell superior

```
pairs(iris[,1:4], pch = 19, lower.panel = NULL)
```



3.Fent servir l'especie (variable categòrica) per a colorejar els punts per groups

```
colors_spe <- c("#00AFBB", "#E7B800", "#FC4E07")
pairs(iris[,1:4], pch = 19, cex = 0.5,
      col = colors_spe[iris$Species],
      lower.panel=NULL)
```



4. Afegim correlacions en el scatter plot

```
# Configurem el panell superior
panell.superior<-function(x, y){
  points(x,y, pch=19, col=c("#00AFBB", "#E7B800", "#FC4E07")[iris$Species])
  r <- round(cor(x, y), digits=2)
  txt <- paste0("R = ", r)
  usr <- par("usr"); on.exit(par(usr))
  par(usr = c(0, 1, 0, 1))
  text(0.5, 0.9, txt)
}
pairs(iris[,1:4], lower.panel = NULL,
      upper.panel = panell.superior)
```

