testproj

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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.

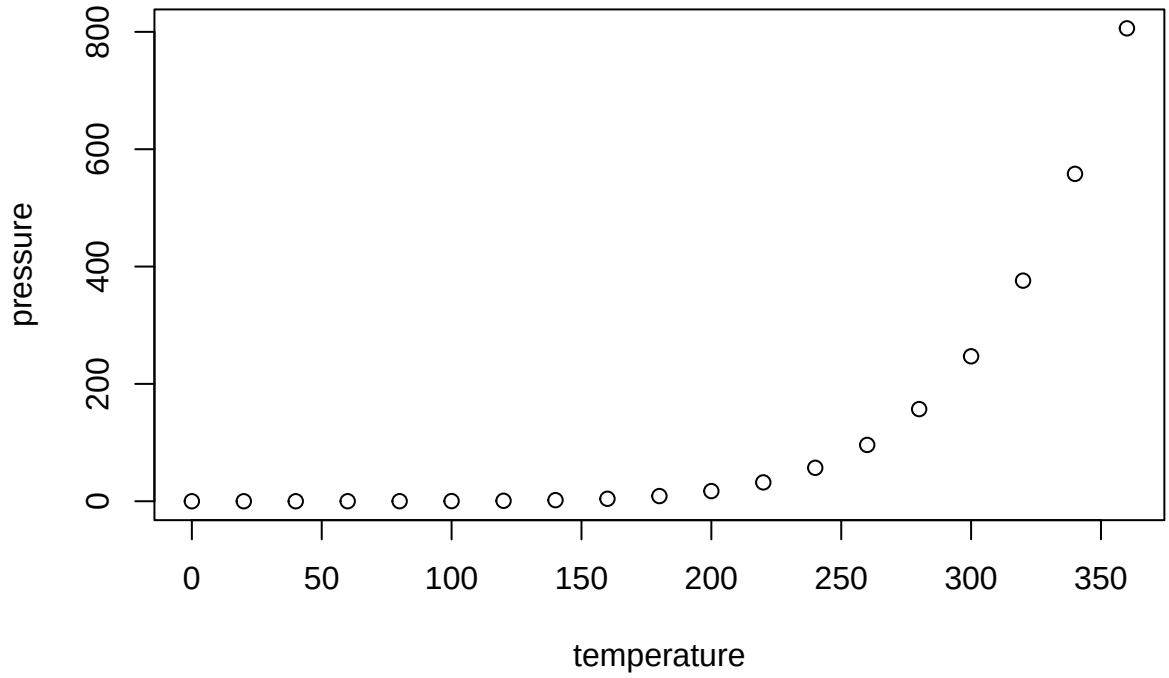
When you click the **Knit** button a document will be generated that includes both content as well as the output of any embedded R code chunks within the document. You can embed an R code chunk like this:

```
summary(cars)
```

```
##      speed           dist       
##  Min.   : 4.0   Min.   :  2.00  
##  1st Qu.:12.0   1st Qu.: 26.00  
##  Median :15.0   Median : 36.00  
##  Mean   :15.4   Mean   : 42.98  
##  3rd Qu.:19.0   3rd Qu.: 56.00  
##  Max.   :25.0   Max.   :120.00
```

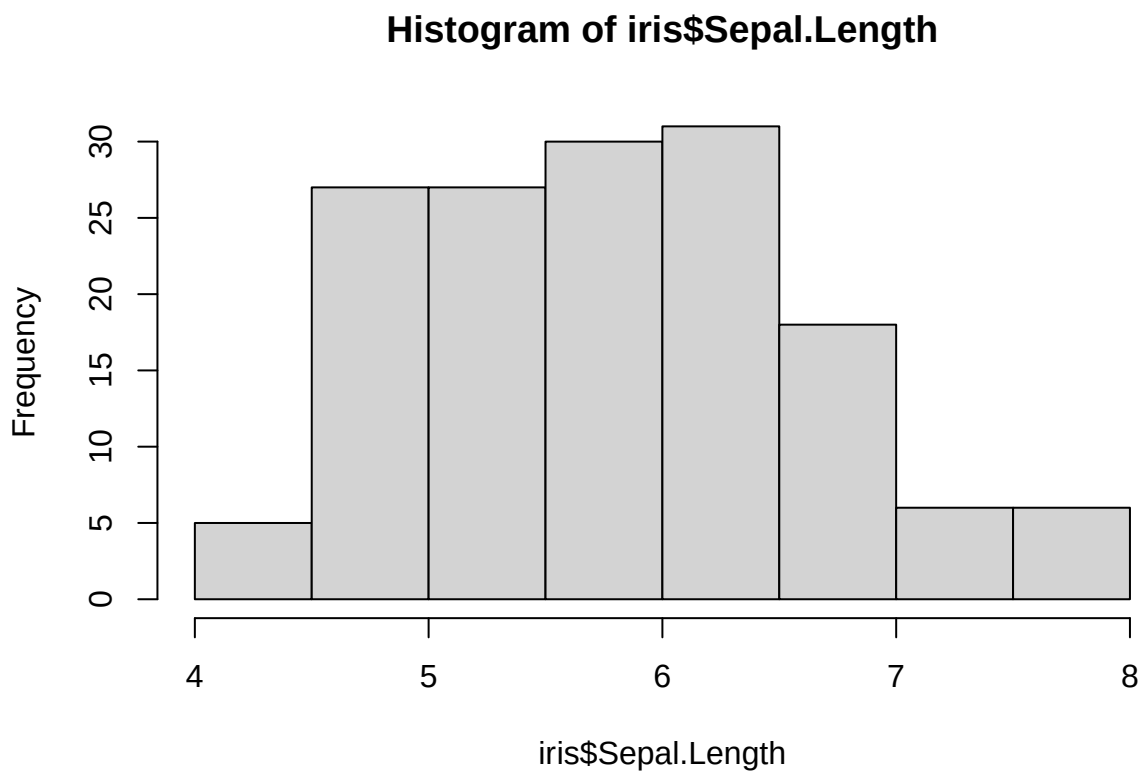
Including Plots

You can also embed plots, for example:



JE voulais ajouter que je mange du pain. Je fais un graphique en barre

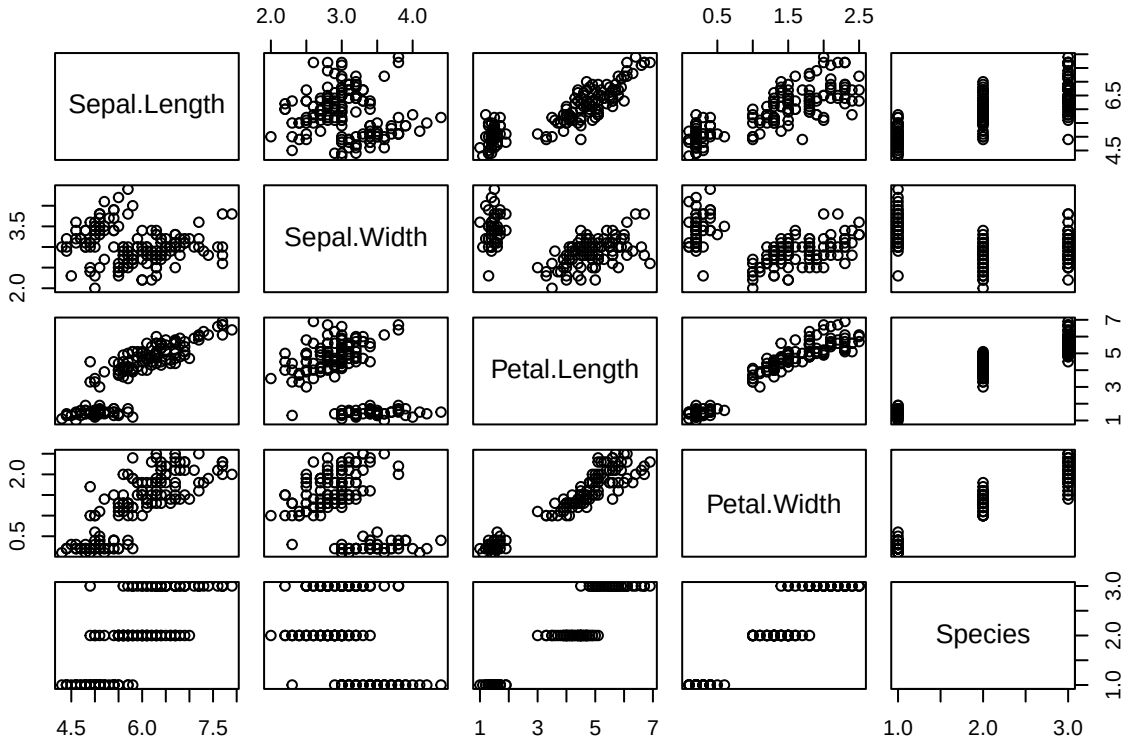
```
hist(iris$Sepal.Length)
```



Et maintenant je vais manger des croques pour caler le café.

Je me demande s'il existe un lien entre deux variables

```
plot(iris)
```



Linear Regression

Une simple régression linéaire nous dirait rapidement de quoi il s'agit.

```
lm(iris$Sepal.Length~iris$Petal.Length) %>% summary
```

```
##
## Call:
## lm(formula = iris$Sepal.Length ~ iris$Petal.Length)
##
## Residuals:
##      Min       1Q   Median       3Q      Max
## -1.24675 -0.29657 -0.01515  0.27676  1.00269
##
## Coefficients:
##                    Estimate Std. Error t value Pr(>|t|)
## (Intercept)         4.30660    0.07839   54.94   <2e-16 ***
## iris$Petal.Length   0.40892    0.01889   21.65   <2e-16 ***
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## Residual standard error: 0.4071 on 148 degrees of freedom
## Multiple R-squared:   0.76,  Adjusted R-squared:  0.7583
## F-statistic: 468.6 on 1 and 148 DF,  p-value: < 2.2e-16
```

Augmenting the model

Pour étudier la question, il pourrait être utile d'ajouter des variables dans le modèle.

```
lm(iris$Sepal.Length~iris$Sepal.Width + iris$Petal.Length) %>% summary
```

```
##
## Call:
## lm(formula = iris$Sepal.Length ~ iris$Sepal.Width + iris$Petal.Length)
##
## Residuals:
##      Min       1Q   Median       3Q      Max
## -0.96159 -0.23489  0.00077  0.21453  0.78557
##
## Coefficients:
##                   Estimate Std. Error t value Pr(>|t|)
## (Intercept)        2.24914    0.24797    9.07 7.04e-16 ***
## iris$Sepal.Width   0.59552    0.06933    8.59 1.16e-14 ***
## iris$Petal.Length  0.47192    0.01712   27.57  < 2e-16 ***
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## Residual standard error: 0.3333 on 147 degrees of freedom
## Multiple R-squared:  0.8402, Adjusted R-squared:  0.838
## F-statistic: 386.4 on 2 and 147 DF,  p-value: < 2.2e-16
```