

IrisAnalysis

William Hangasjärvi

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Installing appropriate version of used packages

```
renv::restore()

## - The library is already synchronized with the lockfile.

#Loading packages
library(tidyverse)

## Warning: package 'tidyverse' was built under R version 4.3.3

## Warning: package 'tibble' was built under R version 4.3.3

## Warning: package 'tidyrr' was built under R version 4.3.3

## Warning: package 'readr' was built under R version 4.3.3

## Warning: package 'dplyr' was built under R version 4.3.3

## Warning: package 'lubridate' was built under R version 4.3.3

## -- Attaching core tidyverse packages ----- tidyverse 2.0.0 --
## v dplyr     1.1.4    v readr     2.1.5
## vforcats   1.0.0    v stringr   1.5.2
## v ggplot2   4.0.0    v tibble    3.2.1
## v lubridate 1.9.4    v tidyrr    1.3.1
## v purrr    1.1.0
## -- Conflicts ----- tidyverse_conflicts() --
## x dplyr::filter() masks stats::filter()
## x dplyr::lag()   masks stats::lag()
## i Use the conflicted package (<http://conflicted.r-lib.org/>) to force all conflicts to become errors
```

Initialize renv

Initializing renv creates a `renv` folder, a `renv.lock` and `.Rprofile`

```
#Make it so project use renv
#renv::init()
```

To update the lockfile we use `renv::snapshot`

Update the lockfile

```
#renv::snapshot()

#Uploading iris data
data(params$data)

## Warning in data(params$data): data set 'params$data' not found

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
```

Data manipulation

```
iris<-iris%>%
  arrange(Sepal.Length)
```

Plotting data

```
IrisPlot <- iris%>%
  ggplot(aes(x=Sepal.Length,y=Petal.Length))+
  geom_point(aes(fill = Species,shape=Species),size=2.5,color="black")+
  geom_smooth(aes(group = Species,linetype=Species),method = "lm",se=FALSE)+
  scale_shape_manual(values = 21:23)+
  labs(title="Relationship between Sepal Length and Petal Length between Species",
       y="Petal Length (mm)",x="Sepal Length (cm)")

ggsave("IrisCorrSepallPetalL.png",plot=IrisPlot,path = params$output_figures)

## Saving 6.5 x 4.5 in image
## `geom_smooth()` using formula = 'y ~ x'
```

IrisPlot

```
## `geom_smooth()` using formula = 'y ~ x'
```

Relationship between Sepal Length and Petal Length between Species

