R & Phyton

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Reticulate

```
library(reticulate)
use_python("/users/ryong/anaconda3/python3.dll")
##py_install("numpy")
##py_install("pandas")
os <- import("os")
```

```
Warning: Python '/users/ryong/anaconda3/python3.dll.exe' was requested but 'C:/
Users/ryong/AppData/Local/r-miniconda/envs/r-reticulate/python.exe' was loaded
instead (see reticulate::py_config() for more information)
```

```
os$listdir(".")
```

```
 [1] ".gitignore"                      "01_Prueba_de_Markdown_PDF.aux"
 [3] "01_Prueba_de_Markdown_PDF.out"   "01_Prueba_de_Markdown_PDF.pdf"
 [5] "01_Prueba_de_Markdown_PDF.Rmd"   "01_Prueba_de_Markdown_PDF.tex"
 [7] "01_Prueba_de_Markdown_PDF_files" "02_Practicas_RMD.pdf"
 [9] "02_Practicas_RMD.Rmd"            "03_Documentacion RMD.Rmd"
[11] "03_Documentacion-RMD.log"        "03_Documentacion-RMD.tex"
[13] "03_RyPython_RETICULATE.html"     "03_RyPython_RETICULATE.pdf"
[15] "03_RyPython_RETICULATE.Rmd"      "sumapy.py"
```

```
source_python("/USER/003_CURSOS/PROJECTS/MATEMATICAS/r-basic/scripts/tema14/sumapy.py")
suma(5,7)
```

```
## [1] 12
```

```
source_python("/USER/003_CURSOS/PROJECTS/MATEMATICAS/r-basic/scripts/tema14/sumapy.py")
producto(3,4)
```

```
## [1] 12
```

```
np <- import("numpy", convert = FALSE)
x <- np$array(c(1:6))
sum= x$cumsum()

print(sum)
```

```
## [ 1  3  6 10 15 21]
```

```
py_to_r(sum)
```

```
## [1]  1  3  6 10 15 21
```

#arrays

```
a <- np_array(c(1:6), order="C")
a
```

```
## [1 2 3 4 5 6]
```

#convertir datos de r a py

```
datos <-iris
head(datos)
```

```
##   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
```

```
datos_py <- r_to_py(datos)
```

```
import numpy as np
import pandas as pd

r.datos_py.head()
```

```
##    Sepal.Length  Sepal.Width  Petal.Length  Petal.Width Species
## 0           5.1          3.5           1.4          0.2  setosa
## 1           4.9          3.0           1.4          0.2  setosa
## 2           4.7          3.2           1.3          0.2  setosa
## 3           4.6          3.1           1.5          0.2  setosa
## 4           5.0          3.6           1.4          0.2  setosa
```