R y Python

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29/4/2020

Reticulate

```
library(reticulate)
use_python("/Users/rogerruiziandres/opt/anaconda3/bin/python3", required = TRUE)
py_config()
```

```
## python:         /Users/rogerruiziandres/opt/anaconda3/bin/python3
## libpython:      /Users/rogerruiziandres/opt/anaconda3/lib/libpython3.7m.dylib
## pythonhome:     /Users/rogerruiziandres/opt/anaconda3:/Users/rogerruiziandres/opt/anaconda3
## version:        3.7.4 (default, Aug 13 2019, 15:17:50)  [Clang 4.0.1 (tags/RELEASE_401/final)]
## numpy:          /Users/rogerruiziandres/opt/anaconda3/lib/python3.7/site-packages/numpy
## numpy_version:  1.17.2
##
## NOTE: Python version was forced by use_python function
```

```
os <- import("os")
os$listdir(".")
```

```
## [1] "R_y_Python.html"  "R_y_Python.pdf"   "R_y_Python.Rmd"   "script_python.py"
```

```
source_python("script_python.py")
add(3,4)
```

```
## [1] 7
```

```
math <- import("math")
math$pi
```

```
## [1] 3.141593
```

```
np <- import("numpy", convert = FALSE)

x <- np$array(c(1:4))

sum <- x$cumsum()

print(sum)
```

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

```
py_to_r(sum)
```

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

```
class(sum)
```

```
## [1] "numpy.ndarray"         "python.builtin.object"
```

```
np <- import("numpy", convert = TRUE)

x <- np$array(c(1:4))

sum <- r_to_py(x)$cumsum()

print(sum)
```

```
## [ 1.  3.  6. 10.]
```

```
edad <- 33
edad_py <- r_to_py(edad)
```

```
a = 3
print(a)
```

```
## 3
```

```
def suma(x,y):
  return x - y

suma(r.edad_py, 6)
```

```
## 27.0
```

```
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 pandas as np

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
```