Vignette ecophylo

Team bouclé

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Rules for working in Rmarkdown with python.

we will need to check the setup chunk for location of python3 binary across different os (ubuntu work with this code)

Python chunks calling R obj.

R chunks works just fine as usual.

```
a <- 42 # set a in R
```

This chunk only work when the markdown is knitted. See that we can call R object when looking for them in 'r' namespace.

```
print(r.a)
```

```
## 42.0
```

```
r.a += 1 # modify R variable in python
print(r.a)
```

```
## 43.0
```

```
b = 666 # set b in python
```

R chunks calling Python obj.

See that we can call python object when looking for them in 'py' list.

```
print(a) # call a in R after modification in python
```

```
## [1] 43
```

```
print(py$b) # call b in R
```

```
## [1] 666
```

```
# Also possible to call directly python function in r
rand <- import('numpy')$random # import python module numpy and submod random
rand$randint(3) # call of function randint
```

```
## [1] 2
```

```
# Be carefull for idiotproof of ecophylo and int class !
eco <- import('ecophylo')
eco$timeframes(I=as.integer(3), T=2, a=0.3)
```

```
## [[1]]
## [1] 0.565357
##
## [[2]]
## [1] 1.226603
##
## [[3]]
## [1] 2
```

```
# make dataframes with pandas is same as R
pd <- import('pandas')
d <- list(col1 = c(1,2,3), col2 = c(4,5,6))
pd$DataFrame(d)
```

```
##   col1 col2
## 1    1    4
## 2    2    5
## 3    3    6
```

You can run python code in interactive mod in the console using the following function : *repl_python(quiet = T)*. It set the console in 'python mode' so you can type in python commands. However you can't send lines from a chunk or a script.

To exit the consol in python, just type *exit* and tadaa the consol is back to R.

Using Python modules in R.

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Serious Part

Introduction

Installation

Repo github

Single simulation