

## Tutorials for R

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I will post here a few tutorials for different types of analysis of microbial communities. For each of these of these tutorials there will be a detailed explanation as a pdf file created with Rmd.

- Introduction to R : [https://github.com/vaulot/R\\_tutorials/tree/master/introduction](https://github.com/vaulot/R_tutorials/tree/master/introduction)
- Visualization and analysis of metabarcode data with phyloseq : [https://github.com/vaulot/R\\_tutorials/tree/master/phyloseq](https://github.com/vaulot/R_tutorials/tree/master/phyloseq)

Please post any question or issues here : [https://github.com/vaulot/R\\_tutorials/issues](https://github.com/vaulot/R_tutorials/issues)

### Prerequisites to be installed to run these tutorials

- R : <https://pbil.univ-lyon1.fr/CRAN/>
- R studio : <https://www.rstudio.com/products/rstudio/download/#download>
- Download and install the following libraries by running under R studio the following lines

```
install.packages("dplyr")      # To manipulate dataframes
install.packages("tidyr")     # To manipulate dataframes
install.packages("readxl")    # To read Excel files into R

install.packages("ggplot2")   # for high quality graphics
install.packages("maps")     # to make maps

install.packages("treemap")   # for treemaps

install.packages("FactoMineR") # multivariate analysis

source("https://bioconductor.org/biocLite.R")
biocLite('phyloseq')          # metabarcode data analysis
biocLite("Biostrings")        # manipulate sequences
```

### Step by step instructions

- Introduction to R : [https://github.com/vaulot/R\\_tutorials/blob/master/introduction/R\\_introduction\\_tutorial.pdf](https://github.com/vaulot/R_tutorials/blob/master/introduction/R_introduction_tutorial.pdf)
- Phyloseq analysis of metabarcode data : [https://github.com/vaulot/R\\_tutorials/tree/master/phyloseq](https://github.com/vaulot/R_tutorials/tree/master/phyloseq)