

Data analysis

Introducing

Description

- Unidimensional descriptive statistics
- Bidimensional descriptive statistics
- Principal component analysis
- Clustering: principle, hierarchical clustering, Kmean and DBSCAN
- Introduction to programming in R and Rmarkdown

Objectives

At the end of this module, the student will have understood and be able to explain (main concepts):

- the main definitions for the unidimensional and bi-dimensional descriptive statistics
- the main concepts and the interpretation of graphical results of the principal component analysis
- the main concepts of clustering (hierarchical clustering, kmeans method and DBSCAN) and the interpretation of graphical results

The student will be able to:

- develop a descriptive statistical analysis with the R software
- manipulate the concepts of the principal component analysis, know the main properties and comment the graphical results

Necessary prerequisites

Probability and Statistic course (L2/2MIC)

Évaluation

L'évaluation des acquis d'apprentissage est réalisée en continu tout le long du semestre. En fonction des enseignements, elle peut prendre différentes formes : examen écrit, oral, compte-rendu, rapport écrit, évaluation par les pairs...

Practical info

Location(s)

 Toulouse