

## Data mining and multivariate statistical analysis Objectifs

The aim of this course is to present the statistical approaches for analysing multivariate data. The information age has resulted in masses of multivariate data in many different fields: finance, marketing, economy, biology, environmental sciences, ... The theoretical and practical aspects of multivariate data analysis are given equal importance. This balance is achieved through practicals involving actual data analysis using the R software.

### Contents:

1. Multiple linear regression. Least squares, Gaussian linear model, test of linear hypotheses
2. One-way and two-way analysis of variance.
3. Principal Components Analysis (PCA).
4. Classification, supervised classification, linear discriminant analysis, unsupervised classification, K-means.
5. Document and pattern mining on graphs.