

Organisation: *Face to face: 51 hours* *Homework: 51 hours* *total load: 102 h*

Objectives:

Machine Learning and Statistical Data Processing are today ubiquitous tools in several fields such as ICT, telecommunications, physics, geophysics, environment, biology, etc. The ever-increasing quantity of information requires the use of advanced statistical methods to make sense of raw data. This course aims at providing the fundamentals of decision theory and above all the practical bases for the implementation of state of the art statistical methods.

Keywords:

Statistical Data Analysis, decision theory, Unsupervised Methods, Supervised Methods

Prerequisites:

Program: -

Content:

- Introduction
- Preprocessing, Feature Extraction
- Statistical Data Analysis
- Bayesian Decision Theory
- Clustering
- Neural Networks
- Hidden Markov Models
- Project

Evaluation: Grading is as follows

- Continuous exam
- Written exam
- Oral exam

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