High Dimensional Statistics and Deep Learning

ECTS
3 crédits

Hourly volume
60h

Introducing

Objectives

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

-How to use deep learning methods for classification in high dimension
-Classification of media or images
-Estimation of the prediction error
-Dimension reduction by projection onto orthonormal bases
-Anomaly detection
-Application of deep learning methods on real data set

At the end of this module, the student should be able to:

-Fit a deep neural network for media or image classification and regression
-Apply anomaly detection algorithms
-Implement deep learning methods in high dimension on real data sets with Python libraries.

Necessary prerequisites

Statistical modelling
Software for statistics

Practical info

Location(s)

Toulouse