UNIVERSITÀ
DEGLI STUDI DI MILANO-BICOCCA

COURSE SYLLABUS

Machine Learning for Multivariate Data Analysis

2627-1-124R013

Title

Machine Learning for Multivariate Data Analysis

Teacher(s)

Davide Ballabio

Language

English

Short description

The course will introduce principles and theory of the main multivariate modelling and machine learning approaches. These can be useful for exploratory analysis, i.e. to find and visualise main patterns in complex data systems (Principal Component Analysis), as well as to relate a set of independent variables to a modelled qualitative or quantitative response (Support Vector Machines and Partial Least Squares). Theory lessons will be supported with guided exercises and practical sessions on real data as case studies. Practical sessions will be based on available MATLAB statistical toolboxes for multivariate data analysis.

Final Evaluation: The final assessment of the course consists of a group-based data challenge where students

collaborate to solve a real-world problem using the methods described in the course.

CFU / Hours

2 CFU - 20 Hours (Lecture)

Teaching period

I semester

Sustainable Development Goals