Machine learning

SCHOOL
Polytech Graduate School of Engineering

CAMPUS
Belle-Beille

LEVEL
Engineering 5th year

OPEN TO EXCHANGE STUDENTS
Yes

SEMESTER
Fall (S1)

> **Degree course:** Graduate School of Engineering - Automation and Computer Engineering
> **Teaching unit:** UE 9.2 Sciences de l'ingénieur
> **Course language:** English
> **Duration (hours):** 28
> **ECTS:** 2
> **Teacher(s):** Mehdi Lhommeau

> **Assessment:**

- [x] Continuous assessment
- [ ] Final exam

> **Teaching methods:**

☐ Lecture course		hours	☐ Case study
☐ Tutorial course		hours	☐ Project
☒ Practical work	28	hours	

COURSE DESCRİPTİON

The first part focuses on standard classification methods (supervised and unsupervised), as well as on the notion of « big data » with related specificities (data volume, notion of deep learning and convnets). The second part focuses on the practice of standard methods (both unsupervised and supervised), using various kind of datasets. For instance, one can mention clustering algorithms, bayesian classification approaches (statistics), decision tree (and random forest), neural networks.

OBJECTİVES

The purpose is to provide to students an introduction to data sciences and, in particular, to data processing. The objective is also to present application examples as well as an overview of the major classes of data processing methods.

PREREQUİSİTES

Algorithmics

SELECTİVE BİBLİOGRAPHY

Data science : fondamentaux et études de cas, E. Biernat et M. Lutz, 2015