

Introduction to Machine Learning

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September 30-4 October 2019 (5 sessions)
09:00 - 11:00 (a total of 10 hours)

This course is an introduction to Machine Learning. Toy and real examples will be used to illustrate the steps for solving a ML problem. We will also illustrate new trends on ML through complex real-world problems.

In order to give the insights of ML, this course aims to be a hands-on approach to the most widely used ML techniques and algorithms. We will use Jupyter Notebooks in Python to illustrate the different methods.

OBJECTIVES:

- Get familiar with the different ML methods and applications.
- Understand the general workflow behind a ML application.
- Get the flavour of standard free software in the ML community.
- Discuss new trends and topics related to ML in industry and academia.

PROGRAMME:

1. Introduction
2. Data pre-processing
3. Supervised classification
4. Model validation and selection
5. Regression
6. Clustering
7. Discussion and new trends

PREREQUISITES: There are no formal prerequisites, but some basic knowledge of Statistics is expected. Master and PhD students are encouraged to participate. The code used in class will be made available and the students are encouraged to bring their laptop. Information about required (free) software to install will be provided after the registration period by e-mail.

***Registration is free, but mandatory before 26th September.** To sign-up go to <https://forms.gle/6o8AsRFpLCS5dHab6> and fill the registration form. Student grants are available. If you need support for travel and accommodation expenses, please, let us know in the form **before September 1st.**