Deep Learning

Lecturer

Lecturer	Email	Office
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General information

Aim and scope

the goal of the course is to gain operative knowledge on the main topics (particularly: architectures and training strategies) of machine learning with deep neural networks, in an application-oriented approach.

Content

1. Brief resume on neural architectures (multilayer perceptron and convolutional)
2. Neural networks for object detection (1 and 2 stages)
3. Graph networks
4. Recurrent neural networks
5. Attention
6. Transformers
7. Autoencoders
8. Generative adversarial networks (GAN)
9. Unsupervised machine learning

Language

English

Assessment Method

Participation in class. Project (definition and achievement of the goals, overall methodology).

Bibliography

Notes by the teacher. Lectures are broadcast and recorded on Teams.

Registration

Please contact the teacher.

Schedule

Topic	Day	Time
Neural architectures	17 July 2025	14-18, A6, Villa Cambiaso

Topic	Day	Time
Object detection	18 July 2025	9-13, A4, Villa Cambiaso
Graph networks, Recurrent neural networks	21 July 2025	14-18, A6, Villa Cambiaso
Attention, Transformers	22 July 2025	14-18, A6, Villa Cambiaso
Autoencoders, GAN, Unsupervised ML	24 July 2025	14-18, A6, Villa Cambiaso

Exam schedule

Date	Where
On appointment	Teacher office