

Deep Learning in Computer Vision

The aim of these lectures is to give an introduction about machine learning and deep learning applied to image processing and computer vision.

The lectures will begin with a small introduction about the evolution of deep learning in the last years and the current state of the art. Machine learning concepts will then be introduced, which are fundamental for understanding how a feed forward neural network works. We will continue by introducing the basics of image processing, so as to be able to understand how an image is represented in the computer. Finally we will explain, in detail, how a deep convolutional neural network is designed and trained.

Prerequisites: good math knowledge and the basics of a programming language, such as Python.

Prof. Giuseppe Lisanti, Dep. Of Industrial and Information Engineering, Computer Vision and Multimedia Lab, University of Pavia