

Title: Computer Vision and Pattern Recognition

Description: The course goal is to provide the fundamentals of Computer Vision tasks, from low-level processing, such as image filtering, to high-level tasks, for instance, object detection and recognition, which, nowadays, find their applications to a multitude of several heterogeneous domains.

The main topics covered in the course are:

- Basics of Image Processing
 - Image formation
 - Image transformation
 - Image Filtering
 - Edge detection
 - Feature detection
 - Keypoint detection
 - Hog features
 - Image Segmentation
- From ML to Deep Learning for Computer Vision
 - Image classification
 - Object detection
 - Semantic and instance Segmentation
- Seminars

Duration of the course: Basic concepts (14h) and Seminars (10h)

Lectures: Carlo Sansone, Antonino Staiano, ecc.