

Classical Computer Vision (Python)

Learn the fundamentals of computer vision, and how they can augment and complement modern deep learning-based techniques. Practice solving vision problems with little data and no ground truth.

Image processing toolbox

Become familiar with the standard toolbox of image processing techniques.

Detecting things in images

Learn how to analyze images and detect various objects, from primitives like edges and corners to segmentation and active contours.

Computer vision and 3D

Learn the basics of analyzing stereo images / video to derive simple 3D scene understanding.

	Day 1	Day 2	Day 3	Day 4	Day 5
09:00	Introduction Image processing basics Representation Basic operations	Computer vision primitives Edges Corners Correlation, convolution	Practice session #2 Finding stuff in images	Practice session #3 Finding more stuff in images	Stereo vision pt. 2 Camera pose estimation 3D reconstruction
17:00	Practice session #1 Fun with image processing	Comp. vis. primitives cont. Feature extraction Preprocessing techniques Finding stuff in images pt. 1 Hough transform Pattern matching	Finding stuff in images pt. 2 Binarization Active contour Segmentation	Stereo vision pt. 1 Epipolar geometry Depth estimation	Practice session #4 Computer vision & 3D Closing remarks

Prerequisites:

- Python programming
- Comfortable with highschool-level mathematical topics