

# **Image and video analysis**

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Image enhancement: Noise filtering, adaptive filters, fast implementations.

Feature detection and matching: Edge detection, corner detection, template matching.

Greyvalue thresholding: Principles of thresholding, Otsu's method, thresholding by Gaussian mixture model, analysis of thresholding.

Model fitting and curve detection: Challenges of model fitting, Hough Transformation (HT) for straight lines, HT for circles, other versions of HT.

Motion analysis: Motion detection, feature and object tracking, KLT Tracker, optical flow, variational methods.