Image recognition — CADLM

What is computer vision ?

- "the construction of explicit, meaningful descriptions of physical objects from images" (Ballard & Brown, 1982)

- "computing properties of the 3D world from one or more digital images" (Trucco & Verri, 1998)

- "a process of making useful decisions about real physical objects and scenes based on sensed images" (Sockman & Shapiro, 2001)

Areas of application

Face recognition

Image retrieval

Surveillance

Gaming and controls

Biometrics

Smart cars

Main domains of image recognition

- Image classification

- Object detection
  - ➡ Selective Search;
  - ➡ R-CNN;
  - ➡ Faster R-CNN

- Object tracking
  - ➡ PCA;
  - ➡ Discriminative method;
  - ➡ Auto-encoders

- Semantic segmentation
  - ➡ Patch classification through a sliding window;
  - ➡ FCN

- Instance segmentation

Bibliography