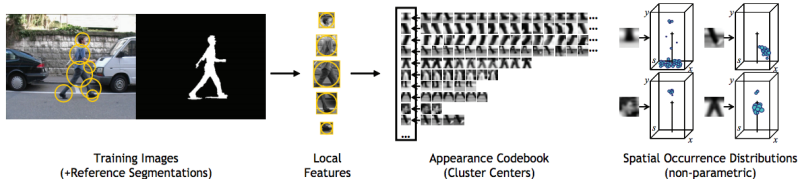


Robust Object Detection with Interleaved Categorization and Segmentation

B. Leibe, A. Leonardis, B. Schiele (IJCV 2008)



- ▶ Proposes a method for learning the appearance and spatial structure of a visual object category in order to recognize novel objects of that category, localize them in cluttered real-world scenes, and automatically segment them from the background
- ▶ Addresses object detection and segmentation not as separate entities, but as two closely collaborating processes
- ▶ Presents a local-feature based approach that combines both capabilities into a common probabilistic framework
- ▶ Initial recognition phase initializes the top-down segmentation process with a possible object location
- ▶ segmentation permits the recognition stage to focus its effort on object pixels and discard misleading influences from the background
- ▶ Uses segmentation in turn to improve recognition
- ▶ Evaluates on UIUC Cars, CalTech Cars, TUD Motorbikes, VOC05 Motorbikes, Leeds Cows, TUD Pedestrians datasets