Outline
CS376 Computer Vision
Wed, April 20, 2011

Part-based and local feature models for generic object recognition

- Bag of words (no geometry)
    - Local feature correspondence kernel for discriminative learning with local features
        - Pyramid match: descriptors, spatial
        - Example results
- Implicit shape model (star graph for spatial model)
    - Training process
    - Detection (testing) process
- Constellation model (fully connected graph for spatial model)
    - Model definition
    - Example learned models
- Comparison of the two spatial models

Recap of basic recognition models covered in last couple weeks

Motion estimation in video

- Motion field definition, examples
- Motion estimation techniques: dense vs. feature-based
- Optical flow
    - Constraints (brightness constancy and small motion) and optical flow equations
    - The aperture problem
    - Adding the spatial coherency constraint, solving for flow vectors
    - When is it solvable?
- Motion vs. stereo