

## Outline

CS376 Computer Vision

Wednesday, April 13, 2011

### Sliding window-based generic object detection

- Recap of sliding window detection, Viola-Jones face detector
- How to score (evaluate) a window-based detector
- Strengths and weaknesses of window-based detection paradigm

### Discriminative classifiers for image recognition

- Boosting (last time)
- Nearest neighbors
  - Definition of algorithm
  - Example for scene/location recognition, global “Gist” descriptor
  - Pros and cons
- Support vector machines (SVM)
  - Large margin motivation
  - Definition of algorithm for linear case
  - Non-linear SVMs and the kernel trick
  - Multi-class classification via binary SVMs
  - Examples for person detection, gender classification
  - Pros and cons

### Coming up:

- Pset 4 is due Wed 20<sup>th</sup>
- Monday: part-based models, pyramid matching
- Wednesday: video processing