CAP 6412: Advanced Computer Vision
Introduction

• Seminar-Style Class
• We will all take turns presenting papers
• Goals:
  – Survey “latest and greatest” research
  – Learn to read papers
  – Learn to present
Administrivia

• Office Hours:
• T-Th – 11AM to 12:30PM
• ENG3-230
• Course Web-page:
  http://www.cs.ucf.edu/~mtappencap6412
Expectations

• Each student will be required to present one paper
• All others will be required to turn in a 1-2 page report on the paper
• Due at beginning of class
  – If you have genuine reasons to miss class, let me know
Grading

• Reports - 30%
• Presentation - 30%
• Implementations(2) - 40%

Two implementation projects will be assigned over the course of the semester.
  – You will create a basic implementation of a paper
Reports

• Summarize Contributions
• Describe Strengths
• Describe Weaknesses
• What’s Next?
  – What interesting research ideas stem from this paper
  – Is there a cool idea that you could build on?
Presentations

- You will probably only have to do one.
- Please spend time on it.
- What’s the main idea?
- What’s the cool idea?
- Is there some subtle, interesting math?
- What would break this algorithm?
Tips on Reading (Borrowed From Dr. Shah)

• First read once
  – Skip related work
  – Understand problem
  – Do not try to understand details

• Read once more – understand details
  – Try to extract sub-problems
  – Think about how to implement them
  – Read as many
  – late to other Vision Problems you are aware of

• Understand how the sub-problems are combined together.
The Papers

• My Interests
  – Machine Learning
  – Statistical Modeling
  – Machine Vision

• Most of the papers involve a statistical model of images or scenes

• A few learning – only papers

• Three Main Themes:
  – Low-Level Vision
  – Object/Scene Recognition
  – Activity Recognition
    • Could use suggestions for papers on this topic!
Next Time

• I’ll present on graphical models
• From a Book Chapter
• No Report Due
• Please sign-up today or tomorrow