CS331B (3 units)

3dRR: Representation and Recognition

Instructor: Silvio Savarese

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Office: Gates, room: 228

Office hour: by appointment

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Class Time & Location

- Monday & Tuesday 2:15-3:30pm

Agenda

- **Administrative**
  - **Requirements**
  - **Grading policy**
- Overview of this course

Prerequisites

- Some experience in research with one of the following fields: computer vision (CS 231) & machine learning (CS 229)

References:

- R. Szeliski. *Computer Vision: Algorithms and Applications*. Springer, 2011.

- D. A. Forsyth and J. Ponce. *Computer Vision: A Modern Approach* (2nd Edition). Prentice Hall, 2011.

- D. Hoiem and S. Savarese. *Representations and Techniques for 3D Object Recognition and Scene Interpretation*, Morgan Claypool Publishers, 2011

- Links to papers and supplementary material from syllabus page

Requirements

- Co-Present once or twice during the course
  - Each lecture will have theme
  - 2 students share one theme
  - 2 presentations in total
  - Some themes are presented by domain experts
- Read papers and participate at class discussion during paper presentations
  - During the lecture be prepared to ask questions. At the end of each lecture, two discussion leaders are randomly selected: the discussion leader will ask questions to the presenters and lead a 5-minute discussion panel; the quality of the questions & discussion panel will be used for evaluating class participation.
  - The more questions you ask during each lecture, the better!
- Course project [see later]

Course Project Evaluation

- Form your team:
  - 1-2 people per team
  - the quality is judged regardless of the number of people on the team
  - be nice to your partner: do you plan to drop the course?
- Evaluation
  - Quality of the project (including writing)
  - Final ~20 minutes project presentation in class – students will vote your presentation!

Grading policy

- Course project: 50%
  - progress report 5%
  - final report 35%
  - presentation 10%

- Attendance and class participation: 20%
  - See class participation protocol

- Paper presentation (quality, clarity, depth, etc.): 30%

- Late policy project:
  - If 1 day late, 25% off the grade for the project
  - If 2 days late, 50% off the grade for the project
  - Zero credits if more than 2 days

- Collaboration policy
  - Read the student code book, understand what is 'collaboration' and what is 'academic infraction'.
  - Discussing project assignment with each other is allowed, but coding must be done individually
  - Using on line presentation material (slides, etc…) is not allowed in general. Exceptions can be made and individual cases will be discussed with the instructor.

syllabus

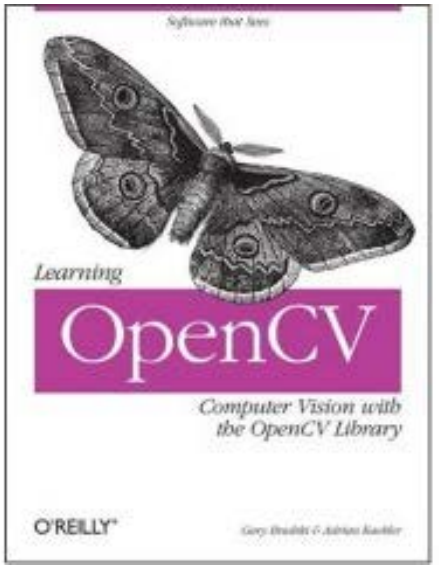
- Syllabus contains the schedule of the course with the list of papers to present:

http://www.stanford.edu/class/archive/cs/cs331b/cs331b.1142/cgi-bin/mediawiki/index.php/Main_Page

- Look at the syllabus page for important dates (e.g., reports due dates) and updates;

- NOTE: the syllabus page is still under construction

Open Computer Vision



The Open Computer Vision Library has > 500 algorithms, documentation and sample code for real time computer vision.

Tutorial documentation is in O'Reilly Book: Learning OpenCV
http://www.amazon.com/Learning-OpenCV-Computer-Vision-Library/dp/0596516134

http://sourceforge.net/projects/opencvlibrary/

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