Lecture :

Course overview

Juan Carlos Niebles and Ranjay Krishna

Stanford Vision and Learning Lab

Today's agenda

- Introduction to computer vision
- Course overview

Contacting instructor and TAs

- Instructors:
  - Dr. Juan Carlos Niebles
  - Ranjay Krishna
- Teaching Assistants
  - Don Lee, Masters, CS
  - Olivier Moindrot
  - Xiaoyan Wu
- Office hours listed online.

Contacting instructor and TAs

- All announcements, Q&A in Piazza
  - https://piazza.com/stanford/fall2017/cs131
- All course related posts should be public.
- All private correspondences to course staff should post private (instructors only) post on piazza.
  - Use this for personal problems and not for course related material.

Overall philosophy

- Breadth
  - Computer vision is a huge field
  - It can impact every aspect of life and society
  - It will drive the next information and AI revolution
  - Pixels are everywhere in our lives and cyber space
  - CS131 is meant as an introductory course, we will not cover all topics of CV
  - Lectures are mixture of details techniques and high level ideas
  - Speak our “language”
- Depth
  - Computer vision is a highly technical field, i.e. know your math!
  - Master bread-and-butter techniques: face recognition, corners, lines, features, optical flows, clustering and segmentation
  - Programming assignments: be a good coder AND a good writer
  - Theoretical problem sets: know your math!
  - Final Exam: your chance to shine!

Syllabus

- Go to website…
  http://cs131.stanford.edu

Grading policy - homeworks

- Homework 0 (Basics): 4%
- Homework 1 (Filters - instagram): 8%
- Homework 2 (Edges – smart car lane detection): 8%
- Homework 3 (Panorama - image stitching): 8%
- Homework 4 (Resizing - seams carving): 8%
- Homework 5 (Segmentation - clustering): 8%
- Homework 6 (Recognition - classification): 8%
- Homework 7 (Face detection - Snapchat): 8%
- Homework 8 (Tracking - Optical flow): 8%

All homeworks due on Monday at midnight

Grading policy

- Final Exam: 20%
- Extra Credit: 7%
- Class Notes: 5%

Grading policy - homeworks

- Most assignments will have an extra credit worth 1%. You are expected to get a total of 7% of extra credit points.
  - You can get as many points as you can.
- Late policy
  - 5 free late days – use them in your ways
  - Maximum of 3 late days per assignment
  - Afterwards, 25% off per day late
  - Not accepted after 3 late days per assignment
- Collaboration policy
  - Read the student code book, understand what is ‘collaboration’ and what is ‘academic infraction’

Submitting homeworks

- Homeworks will consist of python files with code and ipython notebooks.

- Ipython notebooks:
  - Will guide you through the assignments.
  - Might contain written questions
  - Once you are done, convert the ipython notebook into a pdf and submit on Gradescope (http://gradescope.com).
    - Access code: M6BYVM

- Python files:
  - All code must be submitted via submission script included in every assignment.
  - Check our course website for details on submissions.

- HW0 and HW1 is live, you can start working on it immediately.

Final exams

- Will contain written questions from the concept covered in class or any questions in the homeworks.
- Can require you to solve technical math problems.

Class notes

- We, as a class, will generate study notes for everyone.
  - 5% of your grade
- Sign up to create notes for a lecture here:
  - https://github.com/StanfordVL/CS131_notes
- All notes will be due within 1 week of the start of the class.
  - Ex, notes for Tuesday will be due the next Tuesday before class starts.
- All notes will be in Latex.
- This is a group effort: Work together with your teammates to create the notes!!