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:
  - Juan Carlos Niebles
  - Ranjay Krishna

- Teaching Assistants
  - Sho Arora
  - Shubhang Desai
  - TBD

Office hours

- **Juan Carlos Niebles:**
  - Fridays 11am - 12pm @ Gates 249
- **Ranjay Krishna**:
  - By appointment until TBD.

- **Sho Arora**:
  - TBD
- **David Rey Morales:**
  - Mondays 4pm - 6pm, Fridays 3pm - 4pm
- **Shubhang Desai**:
  - TBD

Contacting instructor and TAs

- All announcements, Q&A in Piazza
  - https://piazza.com/stanford/fall2018/cs131/home
  - 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 detailed 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): 3%
- Homework 1 (Filters - instagram): 9%
- Homework 2 (Edges – smart car lane detection): 9%
- Homework 3 (Panorama - image stitching): 9%
- Homework 4 (Resizing - seams carving): 9%
- Homework 5 (Segmentation - clustering): 9%
- Homework 6 (Recognition - classification): 9%
- Homework 7 (Face detection - Snapchat): 9%
- Homework 8 (Tracking - Optical flow): 9%

All homeworks due on Monday at midnight

Grading policy

- Final Exam: 20%
- Class Notes: 5%

- Up to Extra Credit: 10%

Grading policy - homeworks

- Most assignments will have an extra credit worth 1% of your total grade.

- Late policy
  - 7 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 (https://www.gradescope.com/courses/24953).
    - Access code: **9XVR52**

- 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. We will try and get all the assignments out to you as soon as they are ready.

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.

- Will contain a lot of multiple choice and true-false questions. We will release a practice final towards the end of the quarter.

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!!

Let's sign up for class notes

Welcome to CS131

Let's have a fun quarter!