Visual Object Recognition
Computational Models and Neurophysiological Mechanisms
Neurobiology 130/230. Harvard College/GSAS 78454

Web site:  http://tinyurl.com/visionclass
            → Class notes, Class slides, Readings Assignments

Location:  Biolabs 2062

Time:      Mondays 03:30 – 05:30

Lectures:
Faculty:   Gabriel Kreiman and invited guests
TA:        Yuchen Xiao

Contact information:
Gabriel Kreiman
gabriel.kreiman@tch.harvard.edu
617-919-2530

Yuchen Xiao
yxiao@g.harvard.edu

Office Hours: After Class. Mon 05:30-06:30 or by appointment
Lectures + Class Discussion [20% of grade]

Reading assignments. [60% of grade]
  One paper per class.
  Total of 11 reading assignments
  Write two paragraphs about the paper:
  Paragraph 1: Discuss one missing control or one problem with the interpretation.
  Paragraph 2: Discuss a logical follow-up question.
  Note: Do not copy and paste the paper. We have already read it.

Final Exam [20% of grade]
Class 1. Introduction to pattern recognition [Kreiman]
Class 3. Lesion studies in animal models. Neurological studies of cortical visual deficits in humans. [Kreiman]
Class 4. Psychophysics of visual object recognition [Jiye Kim]

October 9: University Holiday

Class 5. Introduction to the thalamus and primary visual cortex [Camille Gomez-Laberge]
Class 6. Adventures into terra incognita. Neurophysiology beyond V1 [Frederico Azevedo]
Class 7. First steps into inferior temporal cortex [Carlos Ponce]
Class 8. From the highest echelons of visual processing to cognition [Leyla Isik]
Class 9. Correlation and causality. Electrical stimulation in visual cortex [Kreiman].
Class 11. Computer vision. Towards artificial intelligence systems for cognition [Bill Lotter]
Class 12. Vision and Language. [Andrei Barbu]

FINAL EXAM
Recomemded books

Suggested Books


Other good books

Academic Integrity Policy

All reading assignments will be discussed in class. During class, collaboration and discussion is not only permitted but actually encouraged.

After class, each student must prepare the homework on his/her own. Students should be aware that in this course collaboration of any sort on any work submitted for formal evaluation is not permitted. This means that you may not discuss your problem sets, paper assignments, exams, or any other assignments with other students. All work should be entirely your own.

The use of textbooks, books and articles is encouraged. Students must use appropriate citation practices to acknowledge the use of books, articles, websites or lectures, that were consulted to complete your assignments.

Discussion: Monday 09/18

Reading assignment due: Monday 09/25

Assignment due by email: yxiao@g.harvard.edu

File formats: Word, Latex, Text, PDF

File name = <your_last_name>_Assignment/#.<fileextension>

NO EXTENSIONS

Reading Assignments Link