Visual Object Recognition
Computational Models and Neurophysiological Mechanisms
Neurobiology 130/230. Harvard College/GSAS 78454
Please fill in this poll to get to know more about you:

https://forms.gle/GfJHKhFATxC5rYPU9
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 03:00 – 05:00
       (except first class on Wed Sep 1st)

Lectures:
Faculty:  Gabriel Kreiman (and invited guests)

Contact information:
Gabriel Kreiman
gabriel.kreiman@tch.harvard.edu
Office Hours: Before class (Mondays 2pm), after class (Mondays 5pm). By appointment
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<tbody>
<tr>
<td><strong>Class participation</strong></td>
<td>15%</td>
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<tr>
<td><strong>Comments on lecture notes</strong></td>
<td>15%</td>
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<tr>
<td><strong>Homework</strong></td>
<td>50%</td>
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<td><strong>Final paper</strong></td>
<td>20%</td>
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GRADING. Comments on lecture notes* 15%

Lecture notes available at:

Maximum grade per week = 10 points.

- Spelling/grammar/wrong citation/wrong figure reference/etc: 1 point
- Undefined word in text, undefined variable in equation: 2 points
- Error in equation: 10 points
- Erroneous statement: 5 points
- Suggestion for figure improvement: 4 points
- Specific clarification question: 3 points
- Relevant work missing in notes: 3 points

Filename: <YOURNAME>_LECTURE<LECTURENUMBER>_COMMENTS

Format: PDF, Word, Text, Latex

Lecture number, line number, your comments/edits

Due date: Monday, day of the lecture at midnight.

Upload to Canvas
GRADING. Homework* 50%

One reading assignment per class.
Original scientific literature
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.

Filename: <YOURNAME>_Assignment<AssignmentNumber>
Format: PDF, Word, Text, Latex
Due date: One week after assignment discussion in class. Monday, midnight. See specific dates on website.
Upload to Canvas
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Class 1 [09/01/2021]. Introduction to Vision
Note: no class on 09/06/2021
Class 2 [09/13/2021]. Natural image statistics and the retina
Class 3 [09/20/2021]. The Phenomenology of Vision
Class 4 [09/27/2021]. Learning from Lesions
Class 5 [10/04/2021]. Primary Visual Cortex
Note: no class on 10/11/2021
Class 6 [10/18/2021]. Adventures into terra incognita
Class 7 [10/25/2021]. From the Highest Echelons of Visual Processing to Cognition
Class 8 [11/01/2021]. First Steps into in silico vision
Class 9 [11/08/2021]. Teaching Computers how to see
Class 10 [11/15/2021]. Computer Vision
Class 11 [11/22/2021]. Connecting Vision to the rest of Cognition

FINAL EXAM, PAPER DUE 12/14/2021. No extensions.
Recommended books


Other good books

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 09/13/2021

Reading assignment paper due: Monday 09/20/2021

Reading available at:
http://klab.tch.harvard.edu/academia/classes/Neuro230/2021/Neuro_130_230_Reading_Assignments_2021.html