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

Web site: http://tinyurl/visionclass (Class notes, readings, etc)
Location: Biolabs 1075
Time: Mondays 03:30 – 05:30
Dates: Mondays 09/08, 09/15, 09/22, 09/29, 10/06, 10/20, 10/27, 11/03, 11/10, 11/17, 11/24, 12/01

Lectures:
Faculty: Gabriel Kreiman
Instructor: Jed Singer

Contact information:
Gabriel Kreiman
gabriel.kreiman@tch.harvard.edu
617-919-2530
Office Hours: After Class. Mon 05:30-06:30
Reading assignments. One paper per class. [60% of grade]
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.
<table>
<thead>
<tr>
<th>Class</th>
<th>Date</th>
<th>Topic</th>
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<tbody>
<tr>
<td>Class 1</td>
<td>Sep-08</td>
<td>Introduction to pattern recognition. Why is vision difficult?</td>
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<tr>
<td>Class 3</td>
<td>Sep-22</td>
<td>Introduction to the cortex. The thalamus and primary visual cortex.</td>
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<td>Class 4</td>
<td>Sep-29</td>
<td>Psychophysics of visual object recognition.</td>
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<td>Class 5</td>
<td>Oct-06</td>
<td>Lesion studies in animal models. Neurological studies of cortical visual deficits.</td>
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<td>Oct-13</td>
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<td><strong>Columbus Day. No class.</strong></td>
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<td>Class 6</td>
<td>Oct-20</td>
<td>Adventures into <em>terra incognita</em>. Neurophysiology beyond primary visual cortex.</td>
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<td>Class 7</td>
<td>Oct-27</td>
<td>The last frontier in visual recognition: inferior temporal cortex</td>
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<td>Class 8</td>
<td>Nov-03</td>
<td>From the highest echelons of visual processing to cognition</td>
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<td>Class 9</td>
<td>Nov-10</td>
<td>Correlation and causality. Electrical stimulation in visual cortex.</td>
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<td>Class 11</td>
<td>Nov-24</td>
<td>Computational models of visual object recognition.</td>
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<tr>
<td>Class 12</td>
<td>Dec-01</td>
<td>Computer vision. Towards artificial intelligence systems for cognition</td>
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Recommended 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.

http://isites.harvard.edu/icb/icb.do?keyword=k106380

Discussion: Monday 09/15

Reading assignment due: Monday 09/22