Review of Week 6
Quiz F will be on week 6 reading/TED videos and lecture material.

Due to President’s Day holiday (2/19) no lecture or sections on Monday.

Optional sections will be held on Wednesday and Friday. TA/IAs will review material for (online) Quiz F.

Midterm-2 is on Monday during lecture of Week 8
- Scantron provided – multiple choice/match format.
- Midterm-2 covers all material from weeks 4 – 6.

Midterm2-Review on Friday 2/23 during lecture.
**Scott- Distributed Cognition**

- What are the various views on cognition? Compare and contrast how they differ.
  - Behaviorism
  - Cognitivism
  - Post-cognitivism
- What does “Cognition in the Wild” mean?
- What are the insights about cognition based on the view of distributed cognition?
- What is the BIG problem of cognition?
  - Know the manifestations of it.
  - What can we do to solve this problem?
What scopes of comparative study were mentioned by Dr. Rossano?
What does WEIRD stand for? Why this concept is important for research?
What is accountability? What are the examples mentioned in the class related to this concept?
What is the ‘Ultimatum Game’?
At what level(s), does Dr. Rossano study social interaction?
Know the characteristic differences among humans, chimpanzees and bonobos. Food sharing?
What is property? How does the understanding of this concept differ across the life span of human? (What is different about a 2 year old and a 3 year old?)
What are the voice and gaze following studies presented by Rossano in lecture? What do they illustrate? What is so important about darkly colored sclera?
Describe and discuss the steps to building a neural network to read hand-written digits.

- How was the input to the neural network represented?
  - How did this representation relate to the activation value for each input unit?
  - What is the purpose of the weights in the network?

- How did the network distinguish between a 9, 8 and 4?

- What is the purpose of the sigmoid function? What happens to very large numbers? Very small numbers?
  - What is the output of the network?

- What aspects of digit recognition (in a simple neural network) are similar to how visual information is processed in the brain?

What are the characteristics of an ‘integrate and fire’ neuron?

Discuss the simple neuron model used in neural networks - in which ways does that model capture a real neuron? In which ways does it diverge?

What are the three types of learning presented in lecture?

- What are the differences between sensitization, habituation and conditional learning?
- How are these changes reflected in the neuron’s response?
- How would you relate these changes to the concept of Hebbian Learning?
Reading Questions:

- Economists have been interested in the tension between what is individually rational and what is rational at the aggregate level. This theme has been explored in what game theories?
- Cognitive processes can be distributed across what domains?
- How does complex internal functions, such as language primarily arise?
- What is the view of classical cognitive science regarding to the environment?
- Young human children treat resources generated collaboratively in special ways. How do they share food with partners?
- How do chimps and human children choose to act alone versus in collaboration when given a choice?
- Know the results of Vaish, Carpenter, and Tomasello’s study (2011).
- Know the three basics of a stable cooperation.
- What was interesting about the art produced in the deep learning networks presented in the TED lectures?