COGS 123, COGS 223, CSE 173, EECS 273
Computational Cognitive Neuroscience
Specification for Exercise #8

David C. Noelle

Due: 3:00 P.M. on Thursday, March 23, 2017

Overview

This exercise is intended to provide you with insights into how computational cognitive neuroscience methods may be used to increase our understanding of human reinforcement learning and motor control, with a focus on the roles played by the basal ganglia and the cerebellum.

Submission for Evaluation

You should complete all of the activities described below and then generate a written document answering the specified questions. This document should be submitted for evaluation using the "Assignments" section of the class CatCourses site. (If there is a problem with CatCourses, this file may be submitted to the instructor via standard electronic mail.) Your submitted document *must* be formatted as a PDF file, though document preparation software of your choice may be used to generate this file. Other formats (e.g., Word® documents) **will not be accepted.** (If you don't know how to convert your solution document into PDF format, please contact a member of the teaching team about this matter well before the exercise due date.) Exercise results should be submitted by 3:00 P.M. on March 23rd.

All of the work submitted for evaluation should reflect the labor and understanding of the submitting student. Prose plagiarized from another source, including the course textbook, is *not* acceptable and will be dealt with harshly. Any assistance received in the process of completing this exercise should be explicitly cited, **even if that assistance was provided by fellow students or members of the teaching team**.

Activities

Complete the following exercise projects, all of which are available from the class CatCourses site: "`bg.proj`", "`pvlv.proj`", and "`cereb.proj`". Prepare a brief document which provides answers to the following questions:

- Question 7.1.
- Question 7.2.
- Question 7.3.
- Question 7.7.
- Question 7.8.
- Question 7.10.