

Lab #1

Questions:

1. Graph quantities showing convergence of Qas.

- Try
- i) Qas updated by nearby states.
 - ii) Qas updated by ultimate reward received
 - iii) Qas updated

Graphs should have a name and title that includes the date, have big font arial in Bold.

2. Using NimScript, figure out what the correct Nim play is for rows with 3,4 and 5 matches.

3. What is correct Nim play handed rows with 7, 29 and 31 matches?

Lab #1 (cont)

Questions:

4. We argued last time that re. learning was a dynamical system. In typical dynamical systems, the long time behavior of the system has features that are sensitive to the details of the algorithms and features that are not. (Recall ionized ring, vortices, random walk \Leftrightarrow Wiener process, modularity, evolution).

You can look at this issue from the top-down (identify features, what made these gross features disappear) or from the bottom-up (What didn't change as I twiddled parameters).

As you change parameters in this Q learning problem what do you observe?

Please email as a team or individually to pbaldwin@hnl.bcm.tmc.edu