CSC 449/549 — Advanced Topics in Artificial Intelligence
Deep Reinforcement Learning

Fall, 2022

Alternative Final Exam

Implement Sarsa(λ) for the Pole Balancing problem as described in Sutton and Barto. Use linear function approximation. You can use any method you want to create the feature vector, including but not limited to:

- Fourier basis functions,
- radial basis functions,
- polynomial basis functions,
- deep learning techniques.

Write a report to describe your approach, citing any sources as appropriate. Your report should follow a typical conference research paper outline with the following sections:

- Abstract
- Introduction/Background
- Related Work
- Description of experiments
- Results
- Comments and Future Work
- References

You should show at least nine learning curves (multiple curves can be shown on the same graph) for various parameter settings. Your report should be between 6 and 10 pages in length, ten to twelve point font, single-spaced, one or two columns.

Turn in your report and your code through D2L.