CS 4320: Machine Learning

Reinforcement Learning with Artificial Neural Networks

Now that you have some experience with neural networks, you can apply them to a different type of learning. You will train an agent with Q-Learning style reinforcement learning with an artificial neural network as an approximation function.

Assignment Requirements

- Select a task from the OpenAI Gym to train an agent on. The selected environment should either have large or continuous state space and a manageable discrete action space.
- Design a neural network for a Q-Learning agent in this environment.
- Report the environment selected, the structure of the network used, the quality of the agent, and the amount of time required to train the agent.
- Submit the code and the report to Canvas.