

## EE 526X Deep Machine Learning: Theory and Practice — Final Project

Assigned: 12/04. Due: 12/21

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This project is to design a reinforcement learning algorithm using double Q-learning algorithm with function approximation. Two multi-layer neural networks should be designed as the Q function approximators. The environment should be **Acrobot-v1**, taken from the OpenAI Gym package.

To be submitted:

- A report in PDF format, including a description of the problem, a description of the neural networks, pseudo-code for the algorithm, performance of the algorithm, training time, lessons learned, and possible improvement.
- Source code in Python format.

The grading of the project will be based on the quality of the report, performance achieved (the final score per episode, and number of episode needed to achieve the performance, and complexity of the neural network, training time), and quality of the code.

Any code taken from the Internet (or peers in the class) will need to be clearly labeled with the source of the code.

END OF ASSIGNMENT