

## Homework #7

For the following problems: CartPole, MountainCar and LunarLander, implement the following strategies for optimal control using linear function approximation.

- 1) Monte Carlo
- 2) Semi-gradient SARSA
- 3) Semi-gradient QLearning

You need to decide on what you will use for  $x(s)$ , but at least you should use one of:

- State aggregation
- RBF, polynomial or Fourier basis
- Tiling

For each one of the problems, you need to turn in:

- Source code, explanation of the encoding function  $x(s)$  for each problem
- Short movie playing the environment
- Graph of training rewards over episodes played