CAP 6629: Reinforcement Learning

Course project 1

Submission: Two files (one .ipynb and one .pdf) with your code, results and analysis.

Your submission should follow the guidelines we discussed in class.

In this class, we have learned Q-learning algorithm. Please implement the algorithm on a grid world goal searching problem.

1. Design your own grid world problem: you can design arbitrary grid world problem but should be bigger than 4*3; the grid world **must** include obstacles or walls.
2. Design your states, actions, and rewards.
3. Implement your Q-learning algorithm.
4. Show your goal searching process with step-to-go curve, and learned Q-table (good to show some intermediate Q-tables).
5. Please follow the project guidelines and submit the code.