CSCI 397: Building the Value Function

Due Date: Friday October 6th @ 11:59 PM

Information

In this assignment, you have already built a Markov Reward Process, now I want you to calculate the value function for your MRP. This can involve the iterate process of applying the Bellman equation to each state on a repetitive process or using the close form solution. Once you do that, I want you to visually show me what the result of your value function is (aka tell me about the optimal policy through your MRP).

Report the values of each state, this could be a separate function within your assignment 2 that purely calculates the value at each state.

Task 1: Calculate the Value Function

1. Understand what the value function's purpose is within the context of your MRP
2. Apply the Bellman equation iterative OR use the close form solution
3. Report the calculations of the value of each state
4. Report the optimal policy through the network (this part doesn't need to be in code, but it should follow your value calculations.
5. Tell me if your MDP is solved given your optimal policy and report the max reward possible.