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CIS 421 Artificial Intelligence

Assignment 6 Writeup

I was confident in my output throughout the design of the program, but when I got to the end and tested all of the different learning rates and discount factors, pretty much all of the output looked the same. I'm not sure if the test is too small to make much of a difference, or if there is a flaw in the design. I'm willing to bet it's a design flaw, but a path is found nonetheless, and it is fairly efficient.

It does seem like when the discount factor is high and the learning rate were high, the reward was higher, but there was a less optimal route taken. There are also some conditions that I'm not sure what happens, but it outputs an incredibly high reward. I've seen up to 6,000 I believe. It is difficult to say which parameters worked the best, but I can definitely say when both values are high, it is less optimal. If I had to choose which was the best, then it would be the 0.1 learning rate and 0.5 discount factor.