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Homework

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Project 3

Question 6 (1 point): Bridge Crossing Revisited

First, train a completely random Q-learner with the default learning rate on the noiseless BridgeGrid for 50 episodes and observe whether it finds the optimal policy.

python gridworld.py -a q -k 50 -n 0 -g BridgeGrid -e 1

Now try the same experiment with an epsilon of 0. Is there an epsilon and a learning rate for which it is highly likely (greater than 99%) that the optimal policy will be learned after 50 iterations? question6() in analysis.py should return EITHER a 2-item tuple of (epsilon, learning rate) OR the string 'NOT POSSIBLE' if there is none. Epsilon is controlled by -e, learning rate by -1.

Note: Your response should be not depend on the exact tie-breaking mechanism used to choose actions. This means your answer should be correct even if for instance we rotated the entire bridge grid world 90 degrees.

To grade your answer, run the autograder:

python autograder.py -q q6

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