

Impact of Parameter Choices in RL

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Graded Assignment • 40 min



English ▾

Due Jun 30, 11:59 PM +07

Your grade: 100%

Your latest: **100%** • Your highest: **100%**

To pass you need at least 80%. We keep your highest score.

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1. Which of the following meta-parameters can be tuned to improve performance of the agent? Performance refers to the cumulative reward the agent would receive *in expectation* across different runs. (Select all that apply)

1 / 1 point

- ☒ Number of hidden-layer units in a neural network approximating the value function

✓ **Correct**

Correct. If the number of hidden units is too small, the representational capacity may be insufficient for learning good behavioural policies. On the other hand, a large number of hidden units could help to learn a good representation, but learning progress might be very slow due to the sheer number of parameters.

- ☒ Exploration parameter (e.g., epsilon in e-greedy or the temperature tau in the softmax policy)

✓ **Correct**

Correct. We have to try different levels of exploration that the agent begins with, because different problems may require different extents of exploration. We do not know this beforehand.

- ☐ Random seed (for the random number generator)

- ☒ The step size in the update rule of the learning algorithm (e.g., alpha in Q-learning)

