


Impact of Parameter Choices in RL

[← Back](#)

Graded Assignment • 40 min

 **Due** Jul 30, 11:59 PM +07

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 point

- ☒ Exploration parameter (e.g., epsilon in e-greedy or the temperature tau in the softmax policy)
- ☒ The step size in the update rule of the learning algorithm (e.g., alpha in Q-learning)
- ☐ Random seed (for the random number generator)
- ☒ Number of hidden-layer units in a neural network approximating the value function

2. Suppose a problem that you have formulated as an MDP has k continuous input dimensions. You are considering using tile coding as a function approximator. With T tilings and t tiles per dimension in each tiling, which of the following represent the resultant number of features? (Assume each tiling covers all k dimensions.)

1 point

- ☐ $T \cdot t \cdot k$
- ☐ $k \cdot T^t$
- ☒ $T \cdot t^k$
- ☐ $T \cdot t / k$

3. Which of the following statements regarding feature-construction methods are TRUE? (Select all that apply)

1 point