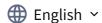**On-policy Prediction with Approximation**
Practice Assignment • 30 min

🌐 English ⌄

Your grade: 95.83%

Your latest: **95.83%** • Your highest: **95.83%**

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

Next item →

1. Which of the following statements is true about function approximation in reinforcement learning? (**Select all that apply**)

   ☐ We only use function approximation because we have to for large or continuous state spaces. We would use tabular methods if we could, and learn an independent value per state.

   ☑ It can help the agent achieve good generalization with good discrimination, so that it learns faster and represent the values quite accurately.

   > ⊘ **Correct**
   >
   > Correct. Recall the 2D plot of generalization and discrimination. Tabular methods discriminate between different states perfectly but with no generalization. Alternatively, one could treat all states as the same, with each update generalizing to all states but with no discrimination. Ideal function approximation methods achieves both good generalization and good discrimination.

   ☑ It can be more memory efficient.

   > ⊘ **Correct**
   >
   > Correct! We cannot enumerate and store all states in a table for large or continuous state spaces. By using function approximation, we can use fewer parameters to represent the value function.

   ☑ It allows faster training by generalizing between states.

   > ⊘ **Correct**

1 / 1 point