Exercise set #9

You do not have to hand in your solutions to the exercises and they will **not** be graded. However, there will be four short tests during the semester. You need to reach $\geq$50% of the total points in order to be admitted to the final exam (Klausur). The tests are held at the start of a lecture (room 2522.U1.74) at the following dates:

Test 1: Thursday, 31 October 2024,   10:30-10:45
Test 2: Thursday, 21 November 2024, 10:30-10:45
Test 3: Thursday, 5 December 2024,   10:30-10:45
Test 4: Thursday, 9 January 2025,   10:30-10:45

Please ask questions in the RocketChat
The exercises are discussed every Wednesday, 14:30-16:00 in room 2512.02.33.

1. **Linear prediction**

   Implement semi-gradient TD(λ) with linear value function approximation. Follow the instructions in the Jupyter notebook `linear-prediction-td-lambda.ipynb`.

2. **Multi-step Double DQN**

   Implement multi-step double DQN and apply it to the CartPole environment, by modifying our existing DQN implementation. Follow the instructions in the Jupyter notebook `multi-step-ddqn.ipynb`.

Exercises by Stefan Harmeling, used with permission