

Assignments & Quizzes

Rules and arrangements

The course will have **seven** compulsory **individual** assignments making up 60% of the final grade. Instructions and materials will appear on this page.

Each assignment will be graded and the assignments constitute the course grade.

Keep in mind that the assignments and quizzes are to be completed **individually by each student**. While it is perfectly fine to discuss the algorithms, implementations and concepts taught in the course with your peers, directly sharing answers, data or code will not be accepted. In short—**share ideas, not answers**.

Remember to submit all your solutions on time, and double-check that your submission contains all the necessary files, as listed at the end of the assignment instruction document.

Each student has **5 days** in total for late submissions. It counts at least 1 day once past the deadline. **We do not accept any submissions or additional files beyond it.** The only exceptions are in well justified cases such as illness (supported by a proper certificate) or military service. If you cannot submit the assignment on time due to university-related reasons, such as attending a conference, please inform the course staff in advance.

Quizzes

The quizzes are individual works and should be completed **independently**. The answers can be found in the lectures and readings. The quizzes will make up 20% of the final grade.

Steps to fetch an assignment:

I- Login to Jupyter.cs.aalto.fi

 <https://jupyter.cs.aalto.fi/hub/login>

2- Select the Reinforcement Learning course from the available Servers

○ ELEC-E8125 Reinforcement Learning D (2023) v6 1 2-rd2023 (rd2023)

3. Click on 'Abgreder Tak' on top of your screen, then click on **Assignment List** option

Nbgrader

4- Now in the new opened window, find the name of the assignment and click on the ****Fetch Button****

5- Click on the name of the assignment and there you can open the related jupyter notebook

Downloaded assignments		
ex1▼	ri2023	<button>Submit</button>
README		<button>Validate</button>
ex1		<button>Validate</button>

Submitted assignments

There are no submitted assignments.

Launcher

Assignments

ex1.py

+

File Explorer

Navigation

Markdown

Git

Validate

Python 3

Reinforcement Learning Assignment 1 - The Reinforcement Learning Framework

This notebook is a part of teaching material for ELEC-E8125

Sep 4, 2023 - Nov 30, 2023

Aalto University

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Student Question 1.1 Learning (10 points)

Student Task 2. Investigating Training Performance (10 points)

Student Question 2.1 Analysis of Training Performance (15 points)

Student Question 2.2 Stochasticity (10 points)

Student Task 3. Reward Functions (20 points)

Student Task 4. Visualizing Behavior (10 points)

Student Question 4.1 Achieved Performance (5 points)

Student Question 4.2 Analysis of Behaviour (10 points)

Total Points: 100

1. Introduction

In this exercise we will take a first look at a reinforcement learning environment, its components and modify the reward function of a simple agent.

In this notebook two environments are used: Cartpole and Reacher. The cartpole environment is taken from [OpenAI's Gym library](#). The reacher environment is custom made (and defined in `reacher.py`) but utilizes the Gym API.

Steps to submit an assignment:

```
1  login to [jupyter --path $jupyter --path $jupyter]
```

2. Select the Brief content Learning from the available 6

3- Click on 'Nbgrader Tab' on top of your screen, then click on ****Assignment List**** option

4- Now in the new opened window, find the name of the assignment and click on the ****Submit Button****

> Make sure you have completed the assignment notebook with all questions answered and missing codes implemented

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