Reinforcement Learning course Exercise arrangements

Reinforcement Learning course staff

Dept. of Electrical Engineering and Automation

September 12, 2021

Exercise structure

▶ Six assignments published and returned on MyCourses (first period)
▶ Published each week with a three week deadline
▶ Programming tasks and open-ended questions
▶ 50% of the total course grade

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Assignments

0. Setting-things up + Pytorch introduction
1. Introduction to Reinforcement Learning
2. Value iteration
3. Grid-based Q-learning
4. Q-learning with function approximation
5. Policy gradient
6. Actor-critic

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Rules

► **Individual work**
► Share ideas, not answers
► Hard deadlines, except well-justified cases

► Follow submission instructions (available on MyCourses)

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Exercise sessions

- ▶ Organized remotely through Zoom
- ▶ Three sessions a week, tentative days:
  - ▶ Monday 12:15, **Tuesday 12:15** (fixed), Wednesday 10:15
- ▶ Poll on MyCourses to choose exercise sessions date:
  - ▶ Monday 12:15
  - ▶ Wednesday 10:15
  - ▶ Friday 10:15
- ▶ Format: Q&A sessions
- ▶ Attendance not compulsory
- ▶ Join whenever you want to—no registration so far (may be changed)

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Organization

- General questions answered in the main room
- Debugging in breakout rooms
- Mute your mic when not speaking

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Slack channel

- ▶ Main communication tool for the course
- ▶ Good place to ask questions
- ▶ Separate channels for each exercise (#exercise-1, etc)
- ▶ Extra points for activity—up to 10% bonus for each assignment
- ▶ Link on MyCourses

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Teaching assistants

Main:

- ► Karol Arndt
- ► Oliver Struckmeier
- ► David Blanco Mulero
- ► Yi Zhao

Helpers:

- ► Aleksi Ikkala
- ► Hossein Firooz
- ► Amr Alkhashab
- ► Andrey Sukhobok

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Course Project

- ► **TO BE ANNOUNCED!**
- ► Second period (released week 43)
- ► 30% of the course grade

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Today

- ▶ Setup time!
- ▶ Goal: get the provided Exercise 1 code to run on your machine
- ▶ Requires you to install OpenAI Gym, PyTorch, and a few others (see the instructions)
- ▶ Works best on Linux, should be fine on Mac
- ▶ Gym support is experimental on Windows

- ▶ Alternative: remote connection to Aalto servers (see the instructions)

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