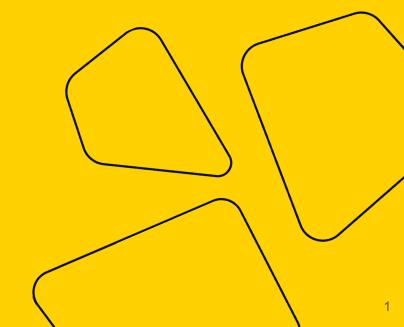# Reinforcement Learning Organizational info

Radoslav Neychev
Sber, 2022

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Outline

1. Team
2. Course structure
3. Rules of play

Team

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01

Radoslav Neychev

Reading lectures on Machine and Deep Learning in Moscow Institute of Physics and Technology, Harbour.Space University (Barcelona, Spain).

Contributed to a variety of research (CERN LHCb, MIPT Machine Intelligence Lab, CC RAS) and industrial projects (Yandex, RaiffeisenBank) in different domains vary from particle identification problem to fraudulent transactions detection.

Graduated from Moscow Institute of Physics and Technology, majoring in Applied Mathematics and Machine Learning.

Deputy head of Machine Learning Department, MIPT.

Course syllabus

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02

Course syllabus

1. Introduction to RL
2. Value-based methods
3. Model-free RL, Q-learning
4. Approximate Q-learning, DQN
5. DQL enhancements: Double and Dueling DQN
6. Policy gradient & REINFORCE
7. Baselines idea, advantage, A2C
8. RL in supervised learning problems. Project discussion.
9. Modern approaches: PPO, TRPO, SAC
10. Projects defence and final discussion

Rules of play

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03

Rules of play

- Three home assignments
  - Several milestones to consolidate knowledge
  - Hard deadlines (approximately 1.5 week for each assignment)
    - Assignment can be resubmitted after the deadline
- Final project
  - Some problem selected **by you** which can be solved using RL methods
  - Discussion of your current progress during the webinars
  - Final defence of your projects by the end of the course

Technical stuff

- Python 3.7+ (unless specified explicitly)
    - Miniconda is recommended for local env managing
    - All practice notebooks available at github
- [Course chat](#) in Telegram
- All materials are (and will be) available [at github](#):
    - `Branch name: 22s_sber`

Thanks for attention!

Questions?

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