

VLADISLAV KURENKOV

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EDUCATION

Innopolis University

Aug 2015 - Aug 2019

Bachelor of Science in Computer Science

Thesis Topic: Systematic Generalization in Language Grounding using Reinforcement Learning

RESEARCH EXPERIENCE

Tinkoff (Research Team)

May 2021 - Present

Research Engineer

Moscow, Russia

- Designed a method for comparing Offline-RL algorithms that takes into account both offline policy selection and limited online evaluation budget. Wrote a paper that has been accepted to both ICML 2022 (**Spotlight**) and the NeurIPS 2021, 2nd Offline Reinforcement Learning Workshop
- Co-organized "Advanced Deep Learning" master-level course (13 weeks) at MIPT
- Currently, supervise 3 students on the following topics:
 - Application of Offline-RL in recommender systems
 - Leveraging pre-trained language models in Offline-RL (transfer to a different modality)
 - Transformers in Offline-RL

Innopolis University (Mechatronics, Control, and Prototyping Lab)

Jul 2019 - May 2021

Junior Research Engineer

Innopolis, Russia

- Designed an approach for combining Evolutionary Strategies and Differentiable Robot Simulators that resulted in a 3x-5x sample complexity reduction when training directly on a real robot. Wrote a paper that has been accepted to the NeurIPS, 4th Robot Learning Workshop
- Conducted experiments on the application of Reinforcement Learning to the Tensegrity hopper control problem using Parameter Space Search algorithms and Domain Randomization, wrote a paper
- Organized and led an internship for 4 bachelor and 1 master students that resulted in
 - A prototype of Differentiable Tensegrity simulator
 - A framework for finding Deep Neural Networks based control policies using Taichi language
- Designed an algorithm for an utilization of hindsight information by Parameter Space Search algorithms based on Multiple Importance Sampling technique
- Designed and developed a software module for modeling, simulation, and control of Tensegrity robots

VK (Deep Learning Lab)

Aug 2018 - Oct 2018

Intern Research Engineer

Saint Petersburg, Russia

- Assisted in enhancements of a technical support system, namely
 - Benchmarked Deep Semantic Similarity Model against classical similarity metrics for querying FAQ pages
 - Conducted multiple experiments to filter out open-domain or troll questions using deep learning based classifiers
 - Designed and implemented a system to generate relevant keywords for FAQ pages using deep learning based classifiers

Samsung R&D (Compilers Lab)

Intern Research Engineer

Jun 2017 - Aug 2017

Moscow, Russia

- Benchmarked various Cross-Project Defect Prediction methods based on Decision Trees and integrated them into a private code-quality platform

PUBLICATIONS

Showing Your Offline Reinforcement Learning Work: Online Evaluation Budget Matters

Vladislav Kurenkov, Sergey Kolesnikov

Spotlight, ICML, 2022

Prompts and Pre-Trained Language Models for Offline Reinforcement Learning

Denis Tarasov, Vladislav Kurenkov, Sergey Kolesnikov

ACL, Workshop on Learning with Natural

Language Supervision, 2022

Guiding Evolutionary Strategies by Differentiable Robot Simulators

Vladislav Kurenkov, Bulat Maksudov

NeurIPS, 4th Robot Learning Workshop, 2021

Learning Stabilizing Control Policies for a Tensegrity Hopper with Augmented Random Search

Vladislav Kurenkov, Hany Hamed, Sergei Savin

IEEE ICIEAM, 2020

Mathematical Modelling of Tensegrity Robots with Rigid Rods

Sergei Savin, Lyudmila Vorochayeva, Vladislav Kurenkov

Computer Research and Modeling, 2020

Task-Oriented Language Grounding for Language Input with Multiple Sub-Goals of Non-Linear Order

Vladislav Kurenkov, Bulat Maksudov, Adil Khan

EEML, 2020

TEACHING EXPERIENCE

Advanced Deep Learning

Master's Course, Lecturer

Moscow Institute of Physics and Technology

Fall 2021

- Prepared and gave a lecture and a seminar on reinforcement learning in recommender systems (Offline-RL, Environment Reconstruction)

Behavioural and Cognitive Robotics

Master's Course, Teaching Assistant

Innopolis University

Spring 2020

- Advised on research projects, helped students with technical and conceptual difficulties, prepared a docker environment for running Deep RL and Parameter Space Search algorithms and visualization

ADDITIONAL EDUCATION

Oxford Machine Learning Summer School

August, 2020

- The school lasted 7 days and covered the key topics in domains such as Bayesian ML, Computer Vision, NLP and reinforcement learning (as well as areas such as Causal ML, Topological ML, and Transfer Learning)

Eastern European Machine Learning Summer School

July, 2020

- This is a one-week summer school around core topics regarding machine learning and artificial intelligence, particularly, this year the focus was on the fundamentals of Deep Reinforcement Learning and Graph Neural Networks.

ACHIEVEMENTS

Ranked Top 1% (19/2187) in International Data Analysis Olympiad, 2019

Ranked Top 2% (24/1567) in International Data Analysis Olympiad, 2018