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EDUCATION

ETH Zurich

Master in Artificial Intelligence

September 2023 – Expected June 2025

Constructor (ex Jacobs) University Bremen

Bachelor in Applied Mathematics and Computer Science

September 2022 – June 2023

Higher School of Economics

Bachelor in Applied Mathematics and Computer Science, GPA 8.73/10

September 2019 – November 2022

PUBLICATIONS AND PREPRINTS

Offline RL for generative design of protein binders

NeurIPS 2023 Workshop AI4D3 (Oral)

Denis Tarasov, Ulrich Mbow Sob, Miguel Arbesú, Nima H. Siboni, Sebastien Boyer, Andries Smit, Oliver Bent, Arnu Pretorius, Marcin Skwark

Revisiting the Minimalist Approach to Offline Reinforcement Learning

NeurIPS 2023

Denis Tarasov, Vladislav Kurenkov, Alexander Nikulin, Sergey Kolesnikov

CORL: Research-oriented Deep Offline RL Library.

NeurIPS 2023

Denis Tarasov, Alexander Nikulin, Dmitriy Akimov, Vladislav Kurenkov, Sergey Kolesnikov

Katakomba: Tools and Benchmarks for Data-Driven NetHack

NeurIPS 2023

Vladislav Kurenkov, Alexander Nikulin, Denis Tarasov, Sergey Kolesnikov

Anti-Exploration by Random Network Distillation.

ICML 2023

Alexander Nikulin, Vladislav Kurenkov, Denis Tarasov, Sergey Kolesnikov

Q-Ensemble for Offline RL: Don't Scale the Ensemble, Scale the Batch Size.

NeurIPS 2022 Offline RL Workshop

Alexander Nikulin, Vladislav Kurenkov, Denis Tarasov, Dmitriy Akimov, Sergey Kolesnikov

Let Offline RL Flow: Training Conservative Agents in the Latent Space of Normalizing Flows.

NeurIPS 2022 Offline RL Workshop

Dmitriy Akimov, Vladislav Kurenkov, Alexander Nikulin, Denis Tarasov, Sergey Kolesnikov

Prompts and Pre-Trained Language Models for Offline Reinforcement Learning.

ICLR 2022 Workshop GPL

Denis Tarasov, Vladislav Kurenkov, Sergey Kolesnikov

Fixing 1-bit Adam and 1-bit LAMB algorithms..

SEIM 2022 (Oral)

Denis Tarasov, Vasily Ershov

Predicting ethnicity with data on personal names in Russia.

Journal of Computational Social Science 2023

Alexey Bessudnov, Denis Tarasov, Viacheslav Panasovets, Veronica Kostenko, Ivan Smirnov, Vladimir Uspenskiy

EXPERIENCE

Research assistant at ETH Zurich Language, Reasoning and Education lab

September 2023 – Present

Research on reasoning and RLAIIF techniques. *Skills:* Python, PyTorch, RLHF, RLAIIF, NLP, LLMs.

Research intern at InstaDeep

June 2023 – September 2023

Research on application of Offline RL techniques to the drug design. *Skills:* Python, JAX, Molecular Biology, RLHF, NLP.

Researcher at Tinkoff AI

October 2021 – June 2023

Researched Offline RL problems and published papers at ICML and NeurIPS main conferences and multiple papers on workshops. Developed popular research-oriented Offline RL library <https://github.com/tinkoff-ai/CORL>. *Skills:* Python, PyTorch, JAX, Flax, NLP, RL.

Machine Learning Engineering intern at Meta

July 2022 – September 2022

Working as a part of the AI Applied Research Relevance team. Experimenting with applying knowledge distillation to entity linking model in order to improve performance using additional signals from unlabeled data. Collected and processed data with signals, added support of newest model version in the debug tool, improved model performance by 4%. *Skills:* Python, PyTorch, Presto.

Machine Learning Engineering intern at Yandex

July 2021 – October 2021

Researched neural networks distributed learning with slow network. Discovered weakness and purposed solution for existing implementations of 1-bit Adam and 1-bit LAMB to prevent divergence. Adapted 1-bit optimizers for production needs. Published results at SEIM 2022 conference. *Skills:* Python, PyTorch.

Research intern at JetBrains Research

July 2020 – August 2020

Research work on predicting of antibodies CDR-H3 loops 3D structures from amino acid sequences with end-to-end Deep Learning approach. Recollected and reprocessed data because original data was incorrect. Modified baseline to make predicted structures physically valid. Applied transfer learning to protein folding network and beaten baseline by 20%. *Skills:* Python, PyTorch, TensorFlow 1, Molecular Biology.

SUPERVISION

Bachelors diploma project supervisor at Constructor University Bremen

November 2023–Present

SIDE PROJECTS

[Multi-agent hide and seek](#)

March 2021 – June 2021

Project at JetBrains Research. The goal of project was to use Unity Engine to reproduce results from "[Emergent Tool Use From Multi-Agent Autocurricula](#)" paper by OpenAI where reinforcement learning agents learned to use different tools to maximize their reward while playing competitive game. One of the environments was fully replicated but desired behavior was obtained only in simplified setting because more complicated setups require vast computations. *Skills*: C#, Unity, Unity ML agents.

[IntelliJ IDEA team statistics plugin](#)

April 2021 – June 2021

The goal of the project was to create IntelliJ IDEA plugin and web-application which allow to track user statistics in working groups via different (including defined by users) metrics. My part of the project was to implement server and web-application. *Skills*: Python, Django.

[Ethnic classification of names and surnames](#)

October 2020 – April 2021

Research project at [Yandex School of Data Analysis](#) on Russian names ethnic classification problem. The goal was to create machine learning algorithm which predicts person's ethnicity by name. My job was to find the best fitting algorithm for the this problem. *Skills*: Python, PyTorch, scikit-learn, pandas, XGBoost, CatBoost, FastText.

[Mithril Project](#)

February 2020 – June 2020

Project on creating smart T-shirt which allows to track whether the posture of the wearer is correct. I did the following things in the project: programmed sensors, created Android application to interact with T-shirt by Bluetooth, used machine learning algorithms to track posture correctness. *Skills*: C, C++, STM32, Kotlin, Python, scikit-learn, pandas.

REVIEW EXPERIENCE

[ICLR 2024](#)

October 2023

[NeurIPS 2023](#)

June 2023

[Workshop on Reincarnating Reinforcement Learning at ICLR 2023](#)

February 2023

HONORS AND AWARDS

NeurIPS 2023 Scholar Award

2023

Awarded with in-person registration and hotel stay to attend NeurIPS 2023

5th All-Russian Student Olympiad "Ya – professional"

2022

Winner in the AI track among undergraduate students, 17th place out of 2000+ participants

"Metric Learning for Facial Descriptors" hackathon by HUAWEI Russian Research Institute at [5th RAAI Summer School](#)

July 2019

2nd place out of 29 participants