

# ALEXANDER NIKULIN

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## EXPERIENCE

### Tinkoff

Sep 2022 – present

Research Scientist

Saint Petersburg, Russia

- Participated at 5 workshop and 4 full papers accepted to the A\* conferences (ICML, ICLR, NeurIPS).
- First author paper on [SAC-RND](#) algorithm (accepted to the ICML 2023) was covered by all major Russian news media. Was awarded with [Yandex ML Prize](#) (Ilya Segalovich Award) in the *First publication* nomination.
- Main developer and maintainer of the [CORL](#) library, which currently has over 800 stars on the GitHub and has become one of the most popular libraries for offline reinforcement learning. Technical paper describing the main results and philosophy of the library has been accepted at NeurIPS 2023.
- Actively attended meetups and conferences, presenting research accomplishments. Presented [CORL](#) library at PyCon Russia 2023 (rated top 8 out of 25+ by the attendees). Presented [CORL](#) & [SAC-RND](#) at the meetups organized by Tinkoff. Gave over 8 talks on my research to university students from three cities (Moscow, St Petersburg, Kazan). Organized several internal research reading clubs for colleagues. Gave several interviews about my work for [Tinkoff Magazine](#), [vc.ru](#) and others.

### Tinkoff

January 2022 – Sep 2022

Research Scientist Intern

Saint Petersburg, Russia

- Conducted the research on the offline reinforcement leaning under the supervision of [Vladislav Kurenkov](#). Publicly [presented](#) the results of the internship at the Innopolis University.
- Proposed and verified more than 5 research proposals during the internship. One of them was accepted to the 3rd Offline Reinforcement Learning Workshop at NeurIPS 2022.

### JetBrains Research

March 2021 – December 2021

Research Assistant

Saint Petersburg, Russia

- Worked on a [Improving Upside Down RL](#) coursework under supervision of [Oleg Svidchenko](#). Developed most of the infrastructure for conducting experiments and training in PyTorch. Tested various modifications of the Soft Actor-Critic algorithm in the Upside Down RL setting.
- Participated in the MineRL 2021 competition, taking 5th place as well as receiving a \$200 award for the community support nomination. As a result, our approach was described in the [paper](#) accepted to NeurIPS 2021.

### Hamburg University of Technology

March 2021 – Sep 2021

Research Assistant

Saint Petersburg, Russia

- Worked on metamaterials design with generative models under supervision of [Alexander Itin](#). Developed most of the infrastructure for conducting experiments and training in PyTorch. Designed and performed the main experiments. Achieved an average threefold improvement over baselines on a variety of metrics. Results were published in the [Photonics and Nanostructures](#) journal.

### VK

July 2019 – Sep 2019

Machine Learning Engineer Intern

Saint Petersburg, Russia

- Wrote a pipeline for the training of graph embeddings using ALS (on millions of nodes) and top-n recommendations of the most similar users using distributed kNN search. The results were tested with an A/B test.
- For the correct sampling of the graph and the tuning of the hyperparameters, also wrote my own [implementation of the Metropolis-Hastings](#) random walk on pyspark.

## SELECTED PUBLICATIONS

### Anti-Exploration by Random Network Distillation

ICML, 2023

[Alexander Nikulin](#), [Vladislav Kurenkov](#), [Denis Tarasov](#), [Sergey Kolesnikov](#)

Poster

### Revisiting the Minimalist Approach to Offline Reinforcement Learning

NeurIPS, 2023

[Denis Tarasov](#), [Vladislav Kurenkov](#), [Alexander Nikulin](#), [Sergey Kolesnikov](#)

Poster

### CORL: Research-oriented Deep Offline Reinforcement Learning Library

NeurIPS, 2023

[Denis Tarasov](#), [Alexander Nikulin](#), [Dmitry Akimov](#), [Vladislav Kurenkov](#), [Sergey Kolesnikov](#)

Poster

### Katakomba: Tools and Benchmarks for Data-Driven NetHack

NeurIPS, 2023

[Vladislav Kurenkov](#), [Alexander Nikulin](#), [Denis Tarasov](#), [Sergey Kolesnikov](#)

Poster

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

NeurIPS, 2022

[Alexander Nikulin](#), [Vladislav Kurenkov](#), [Denis Tarasov](#), [Dmitry Akimov](#), [Sergey Kolesnikov](#)

Workshop

## EDUCATION

### Moscow Institute of Physics and Technology

Sep 2023 – present

PhD in Computer Science

Moscow, Russia

### National Research University Higher School of Economics

Sep 2020 – May 2023

Master of Science in Computer Science

Saint Petersburg, Russia

### National Research University Higher School of Economics

Sep 2016 – May 2020

Bachelor of Science in Sociology

Saint Petersburg, Russia