Nikita Morozov

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Research Interests

Probabilistic Modeling, Generative Modeling, Reinforcement Learning, Sampling, AI for Science

Education

HSE University November 2024 – Present
PhD programme in Computer Science, supervisor: Dmitry Vetrov *Moscow, Russia*

HSE University September 2022 – July 2024
Master's programme 'Math of Machine Learning', GPA: 9.66/10 *Moscow, Russia*

HSE University September 2018 – July 2022
Bachelor's programme 'Applied Mathematics and Information Science', GPA: 9.65/10 *Moscow, Russia*

Work Experience

HSE University, Centre of Deep Learning and Bayesian Methods December 2021 – Present
Research Assistant *Moscow, Russia*
- Current topic: Generative Flow Networks (GFlowNets), supervisor: Dmitry Vetrov
- Previous topic: Novel view synthesis and text-to-3D, supervisor: Kirill Struminsky

EPFL MLBIO June 2024 – September 2024
Research Intern *Lausanne, Switzerland*
- Topic: Geometric diffusion models for single-cell data, supervisor: Maria Brbic

AIRI May 2023 – July 2023
Research Intern *Moscow, Russia*
- Topic: Applying GFlowNet techniques to diffusion models, supervisor: Aibek Alanov

Yandex July 2019 – November 2019
Software Engineer Intern *Moscow, Russia*
- Refining C++ API of distributed computing platform YTsaurus
- Optimization of internal data exchange format parsers and writers

Teaching

HSE University September 2022 – Present
Teaching Fellow *Moscow, Russia*
- Courses: Machine Learning, Deep Learning, Probability Theory

HSE University September 2019 – June 2022
Teaching Assistant *Moscow, Russia*
- Courses: Machine Learning, Algebra, Algorithms and Data Structures

Awards

Ilya Segalovich Scholarship
HSE University & Yandex scholarship for outstanding achievements in study and research *2021, 2023, 2025*

HSE FCS Scholarship for Scientific Contributions
Awarded for the paper "Generative Flow Networks as Entropy-Regularized RL" *2024*

International Collegiate Programming Contest (ICPC)
21/276 place in Northern Eurasia Finals, advanced to World Finals *2023/2024*

International Collegiate Programming Contest (ICPC)
42/281 place in Northern Eurasia Finals *2022/2023*

HSE Student Research Paper Competition
Awardee in computer science category *2022*

Publications

Adaptive Destruction Processes for Diffusion Samplers
Timofei Gritsaev, **Nikita Morozov**, Kirill Tamogashev, Daniil Tiapkin, Sergey Samsonov, Alexey Naumov, Dmitry Vetrov, Nikolay Malkin
NeurIPS 2025 Workshop on Frontiers in Probabilistic Inference

Revisiting Non-Acyclic GFlowNets in Discrete Environments
Nikita Morozov*, Ian Maksimov*, Daniil Tiapkin, Sergey Samsonov
ICML 2025

Tissue Reassembly with Generative AI
Tingyang Yu, Chanakya Ekbote, **Nikita Morozov**, Jiashuo Fan, Pascal Frossard, Stéphane d'Ascoli, Maria Brbić
ICML 2025 Workshop on Generative AI and Biology *(Spotlight)*

Optimizing Backward Policies in GFlowNets via Trajectory Likelihood Maximization
Timofei Gritsaev, **Nikita Morozov**, Sergey Samsonov, Daniil Tiapkin
ICLR 2025

Improving GFlowNets with Monte Carlo Tree Search
Nikita Morozov, Daniil Tiapkin, Sergey Samsonov, Alexey Naumov, Dmitry Vetrov
ICML 2024 Workshop on Structured Probabilistic Inference & Generative Modeling

Generative Flow Networks as Entropy-Regularized RL
Daniil Tiapkin*, **Nikita Morozov***, Alexey Naumov, Dmitry Vetrov
AISTATS 2024 *(Oral)*

Differentiable Rendering with Reparameterized Volume Sampling
Nikita Morozov, Denis Rakitin, Oleg Desheulin, Dmitry Vetrov, Kirill Struminsky
AISTATS 2024, Short version of this paper appeared in ICLR 2023 Workshop on Neural Fields

Weight Averaging Improves Knowledge Distillation under Domain Shift
Valeriy Berezovskiy, **Nikita Morozov**
ICCV 2023 Workshop on Out-of-Distribution Generalization in Computer Vision

* — equal contribution.

Reviewing

ICLR 2025 (3 papers), NeurIPS 2025 (5 papers)

Skills

Programming Languages: Python, C++, C
Deep Learning Frameworks: PyTorch, JAX
Other Programming: Git, Unix, Spark, CUDA (basic knowledge)

Languages

English: C1, **Russian**: Native, **French**: A1