

Nikita Morozov

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Research Interests

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

Education

HSE University <i>PhD programme in Computer Science, supervisor: Dmitry Vetrov</i>	November 2024 – Present <i>Moscow, Russia</i>
HSE University <i>Master's programme 'Math of Machine Learning', GPA: 9.66/10</i>	September 2022 – July 2024 <i>Moscow, Russia</i>
HSE University <i>Bachelor's programme 'Applied Mathematics and Information Science', GPA: 9.65/10</i>	September 2018 – July 2022 <i>Moscow, Russia</i>

Work Experience

HSE University, Centre of Deep Learning and Bayesian Methods <i>Research Assistant</i> <ul style="list-style-type: none">Current topic: Generative Flow Networks (GFlowNets), supervisor: Dmitry VetrovPrevious topic: Novel view synthesis and text-to-3D, supervisor: Kirill Struminsky	December 2021 – Present <i>Moscow, Russia</i>
EPFL MLBIO <i>Research Intern</i> <ul style="list-style-type: none">Topic: Geometric diffusion models for single-cell data, supervisor: Maria Brbic	June 2024 – September 2024 <i>Lausanne, Switzerland</i>
AIRI <i>Research Intern</i> <ul style="list-style-type: none">Topic: Applying GFlowNet techniques to diffusion models, supervisor: Aibek Alanov	May 2023 – July 2023 <i>Moscow, Russia</i>
Yandex <i>Software Engineer Intern</i> <ul style="list-style-type: none">Refining C++ API of distributed computing platform YTsaurosOptimization of internal data exchange format parsers and writers	July 2019 – November 2019 <i>Moscow, Russia</i>

Teaching

HSE University <i>Teaching Fellow</i> <ul style="list-style-type: none">Courses: Machine Learning, Deep Learning, Probability Theory	September 2022 – Present <i>Moscow, Russia</i>
HSE University <i>Teaching Assistant</i> <ul style="list-style-type: none">Courses: Machine Learning, Algebra, Algorithms and Data Structures	September 2019 – June 2022 <i>Moscow, Russia</i>

Awards

HSE FCS Scholarship for Scientific Contributions <i>Awarded for the paper "Generative Flow Networks as Entropy-Regularized RL"</i>	2024
International Collegiate Programming Contest (ICPC) <i>21/276 place in Northern Eurasia Finals, advanced to World Finals</i>	2023/2024
International Collegiate Programming Contest (ICPC) <i>42/281 place in Northern Eurasia Finals</i>	2022/2023
Ilya Segalovich Scholarship <i>HSE University & Yandex scholarship for outstanding achievements in study and research</i>	2021, 2023
HSE Student Research Paper Competition <i>Awardee in computer science category</i>	2022

Publications

Revisiting Non-Acyclic GFlowNets in Discrete Environments

Nikita Morozov*, Ian Maksimov*, Daniil Tiapkin, Sergey Samsonov

Preprint 2025

Tissue reassembly with generative AI

Tingyang Yu, Chanakya Ekbote, Nikita Morozov, Jiashuo Fan, Pascal Frossard, Stéphane d'Ascoli, Maria Brbić

Preprint 2025

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

ICML 2024 (1 paper), ICLR 2025 (3 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