# Nikita Morozov

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#### Research Interests

Generative Modeling, Sampling, Reinforcement Learning, Probabilistic Inference, AI for Scientific Discovery

## Education

HSE University

PhD programme in Computer Science, supervisor: Dmitry Vetrov

November 2024 – Present

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

## Work Experience

#### HSE University, Centre of Deep Learning and Bayesian Methods

January 2025 - Present

Moscow, Russia

Moscow, Russia

Junior Research Fellow

• Topic: Reinforcement learning algorithms for sampling, supervisor: Dmitry Vetrov

# HSE University, Centre of Deep Learning and Bayesian Methods December 2021 – December 2024 \*\*Research Assistant\*\* \*\*Moscow. Russia\*\* \*\*Moscow. Russia\*\*

- Topic: Generative Flow Networks (GFlowNets), supervisor: Dmitry Vetrov
- 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

FusionBrain May 2023 – July 2023

Research Intern Moscow, Russia

• Topic: Applying GFlowNet methods to speed up 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

#### Ilva 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

#### 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 (Oral)

# 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

## Reviewing

## ICLR 2025 (3 papers), NeurIPS 2025 (5 papers, Top Reviewer), ICLR 2026 (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

<sup>\* —</sup> equal contribution.