# Nikita Morozov

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#### Research Interests

Deep Learning, Probabilistic Modeling, Generative Modeling, Reinforcement Learning

### Education

HSE University Starting in October 2024

Ph.D. in Computer Science, supervisor: Dmitry Vetrov

Moscow, Russia

HSE University September 2022 – July 2024

Master's programme 'Math of Machine Learning', GPA: 9.58/10

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

December 2021 - Present

Moscow, Russia

Research Assistant Moscow, Russia

- Current topic: Generative Flow Networks (GFlowNets), supervisor: Dmitry Vetrov
- Previous topic: Novel view synthesis and text-to-3D generation, supervisor: Kirill Struminsky

EPFL MLBIO June 2024 – September 2024

Research Intern

Lausanne, Switzerland

• Topic: Equivariant diffusion models for 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

# **Publications**

### 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

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# **ICML 2024**

# Awards

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	
Ilya Segalovich Scholarship		
HSE University & Yandex scholarship for outstanding achievements in study and research	2021, 2023	
HSE Student Research Paper Competition		
Awardee in computer science category	2022	

# 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