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: 9.66/10	*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 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

Reviewing

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