Nikita Kiselev

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Data Scientist, Optimization Researcher

WORK EXPERIENCE

Sber AI Kandinsky Video Editing Kandinsky Image Editing: o Interior Design with Kandinsky 3 ControlNet for Domclick

- o Kandinsky 3 ControlNet Style (DepthPro) that outperforms ControlNet Union SDXL by 100% on ImageReward

Research Center for Artificial Intelligence, Innopolis University Mathematician-programmer Sep 2024 – Present

Laboratory of Mathematical Methods of Optimization, MIPT

FEATURED PUBLICATIONS

- 1. D. Yarmoshik, A. Rogozin, N. Kiselev, D. Dorin, A. Gasnikov, D. Kovaley. Decentralized Optimization with Coupled Constraints. // Accepted to the ICLR 2025 conference, A*
- 2. D. Dorin, N. Kiselev, A. Grabovoy, V. Strijov. Forecasting fMRI Images From Video Sequences: Linear Model Analysis. // Health Information Science and Systems, Q1
- 3. N. Kiselev, A. Grabovoy. Unraveling the Hessian: A Key to Smooth Convergence in Loss Function Landscapes. // Accepted to the Doklady Mathematics journal, Q2
- 4. N. Kiselev, A. Grabovoy. Sample Size Determination: Likelihood Bootstrapping. // Accepted to the Computational Mathematics and Mathematical Physics journal, Q2

FEATURED TALKS

o April 6, 2024. Determining a sufficient sample size based on the a posteriori distribution of model parameters. // 66th MIPT All-Russian Scientific Conference.

FEATURED ACHIEVEMENTS

- o K.V. Rudakov scientific academic scholarship for research activities in the field of applied mathematics:
 - Fall 2024-2025, Fall 2023-2024
- Personal scholarship for contributions to the development of numerical optimization methods:
 - Fall 2024-2025, Spring 2023-2024, Fall 2023-2024
- O Abramov scholarship for 1-3 year bachelor students with the best grades at MIPT:
 - 2020-2023

SUMMARY

Aspiring researcher (2+ years of research experience) in the field of machine learning and optimization. Focused on generative diffusion and multimodal models. Motivated for productive work and learning. Having a substantial theoretical foundation and mathematical background.

SKILLS

DL: PyTorch, Huggingface, Accelerate, Multi GPU training: DDP/FSDP, W&B, TensorBoard

ML: NumPy, SciPy, Pandas, NetworkX, Scikit-learn, LightGBM, CatBoost

OS: macOS, Linux, Windows

Misc.: Git, Bash, LATEX

Soft: responsible, organized, critical thinker, flexible, communicative, team player, patient

EDUCATION

MIPT Moscow, Russia MSc in Computer Science Sep 2024 – Present MIPT Moscow, Russia BSc in Applied Mathematics and Physics Sep 2020 - Aug 2024

o Thesis: Bayesian Sample Size Estimation

Advisor: Andrey Grabovoy, PhD

O GPA: 4.88/5 (with honours)

LANGUAGES

- Russian (Native)
- English (Advanced)

INTERESTS

- o Gym
- Guitar