

ILYA DROBYSHEVSKIY

Moscow, Russia

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EDUCATION

- **Higher School of Economics** Moscow, Russia
Bachelor of Applied Mathematics and Computer Science; GPA: 8.0/10 *Sep 2021 – Jun 2025*
 - **Specialization:** Machine Learning & Applications.
 - **Relevant courses:** Generative models based on Diffusion, Efficient DL Systems, RL, DL in Audio, Bayesian Methods, Methods of Optimizations, Stochastic Calculus, Algorithms and Data Structures, Linear Algebra, Probability Theory and Statistics, Graph Theory, Abstract Algebra, Calculus.

EXPERIENCE

- **AIRI, Controllable Generative AI** Moscow, Russia
Intern researcher *May 2024 – May 2025*
 - **Tasks:** Engaged in research in the field of FaceSwap via Diffusion Models and GANs supervised by [Alanov Aibek](#).

TEACHING

- **Higher School of Economics** Moscow, Russia
Teacher assistant *Sep 2022 – Present*
 - **Courses:** ML/DL, Matrix Computations, Linear Algebra, Calculus, Probability Theory and Statistics.

INTERESTS & SKILLS

- **Interests:** GenAI, Distillation of Diffusion Models, Audio, Interpretability of Neural Networks.
- **Skills:** Python, C++, PyTorch, JAX, Git, Docker, L^AT_EX.
- **Languages:** Russian (Native), English (Upper-Intermediate), Polish (Upper-Intermediate).

PROJECTS

- **DL in Audio:** Speech to Text with [DeepSpeech2](#), Audio-Visual Speech Separation with [RTFS-Net](#), Neural Vocoder with [HiFiGAN](#).
- **Efficient DL Systems:** Implementation of [FSDP](#), [Tensor Parallelism](#), [SyncBatchNorm](#), [AMP Scaler](#), [LLM sequence packing](#), [PyTorch Profiler](#), [CPU Offloading](#), [Speculative Decoding](#) and [W8A8 Quantization](#).
- **Diffusion/ODE Models:** Simple experiments with [ControlNet](#), [Editing](#), [CFG usage](#) and [Rectify Flow](#).
- **FaceSwap via GANs:** My 3rd year coursework, in which I was researching some of FaceSwap methods and introduced the huge improvements for SOTA method.
- **Generative Models:** My implementation of some generative models/pipelines such as [AutoEncoder](#), [StarGANv2](#), [VAE](#), [DDPM](#), [RAG](#).
- **DL:** Some homeworks from DL course with implementations of [PyTorch analogue](#) (main classes and backpropagation), [Transformer](#) for language translation and [CLIP](#).
- **Image Classifier:** In this competition I had to make a classifier for small images (40 x 40) but there were some limitations such as don't use pretrained models, use only authors data and don't resize up images. My model was taken 3rd place out of 119.
- **ML:** Some homeworks from ML course with implementations of [gradient boosting](#), [some of RecSys](#), [EM-algorithm](#), [methods of clusterization](#) and [anomaly detection](#).

ACHIEVEMENTS

- [The best teacher assistant](#) for the Matrix Computations course in the 2023/2024 academic year.