# ILYA DROBYSHEVSKIY

Moscow, Russia

#### **EDUCATION**

## • Higher School of Economics

Moscow, Russia

Bachelor of Applied Mathematics and Computer Science; GPA: 9.06/10

Sep 2021 - Present

- Specialization: Machine Learning & Applications.
- o Relevant courses: Generative models based on Diffusion, 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 - Present

• Tasks: Doing research in the field of FaceSwap 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: Diffusion Models, RL, Bayesian Methods, Audio, Interpretability of Neural Networks.
- Skills: Python, C++, PyTorch, Jax, Git, Docker, LATEX.
- 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.
- FaceSwap via GANs: My 3rd year coursework, in which we were researching some of FaceSwap methods and introduced the huge improvements for SOTA method.
- 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.
- Generative Models: My implementation of some generative models/pipelines such as autoencoder, StarGAN, VAE, DDPM, RAG.
- DL: Homeworks from DL course with implementations of PyTorch analogue(main classes and backpropagation), MLP, CNN, RNN and Transformer.
- ML: Homeworks from ML course with implementations of gradient boosting, logistic regression, SVM, some of RecSys, EM-algorithm, methods of clusterization, anomaly detection and kernel tricks.

# ACHIEVEMENTS

• The best teacher assistant for the Matrix Computations course in the 2023/2024 academic year.