Sergey Kushneryuk

Latest version of my CV can always be found here

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Education

2023 – 2025 **Joint Master's program "Math of Machine Learning"**, *Skoltech University and NRU HSE*.
- Markov Chains, High Dimensional Probability and Statistics, Optimization methods for ML
- ML, DL, Numerical Linear Algebra, Generative Models, Models for Time Series, Geometrical Methods of ML
- Graduate qualifying Master's Thesis "Improving Diffusion-based Blind Super-Resolution methods via Invertible Image Transformations"

2021 – 2025 **Machine learning developer academic program**, *Yandex School of Data Analysis*.
- Advanced courses on Classical ML and DL, RL, CV and NLP, Bayesian ML

2023 – 2024 **One-year program in Finance and Quantitative analysis**, *School of Quants*.
- Stochastic Calculus, Advanced Statistics, Financial products and Markets, ML

2019 – 2023 **Bachelor Degree in Applied Mathematics and Computer Science**, *Moscow Institute of Physics and Technology*, GPA: 4.7/5.0.
- Basic courses: Further and Discrete maths disciplines, Advanced Computer Science and Data Science disciplines
- Student of Department of Image Recognition and Text Processing founded by ABBYY: DL, CV, NLP
- Student of Advanced Data Science track: ML, DL, Advanced Applied Statistics and AB-testing, Bayesian statistics and Generative models, Time series and Random processes, Clustering methods, NLP, CV

Working experience

2025 - now **Research Scientist Intern**, Huawei Russian Research Institute, CV Team, Python, Pytorch.
- Acceleration and distillation of Diffusion-based models for Image Super Resolution

summer 2024 **NLP Intern**, Tinkoff AI Center, Applied NLP Team, Python, Pytorch, Transformers.
- Accelerating high-performance text anonimization system based on NER and rule-based submodules
- Developing a system for text clustering and conducting experiments on improving quality of clustering with semi-supervised approach

summer 2022 **ML Intern**, Meteum.AI - Weather Experiments Team, Python, TensorFlow, SQL.
- Conducting experiments on improvement of short-term precipitation prediction model with users' reports
- Analysis of weather forecasting for RecSys in e-commerce

summer 2021 **SWE Intern**, Yandex Weather Back-end Team, C++, Python, Go, Google Protobuf.
- Developed 4 new weather scenarios for voice assistant Alice and set up experiments for their AB-testing

Programming skills and experience

ML/DS Experience at implementing and training different ML/DL pipelines: Classical ML, Clustering, Models for Time Series, Bayessian ML, Transformers, Diffusion models

Python pytorch, transformers, diffusers, catboost/xgboost/lightgbm, other standard DS libraries; FastAPI

SWE Familiar with support and development of High Load Distributed Services

Other C++, Go, Linux & Bash & Git, Docker, LaTeX

Projects

2023 **Comparative analysis of techniques for improving the performance of Semantic Segmentation models under class imbalance conditions**, Graduate qualifying Bachelor's Thesis.
Reproducing results of the paper "Unified Focal Loss" under new conditions, new datasets and class imbalance level, comparative analysis of loss functions and identifying dependencies and patterns

2022 **Imagin: recommendation system for clothes picking**, Innovational Workshop at MIPT.
Recommendation system for clothes picking based on DL approach: DSSM, CNN encoders for face and clothes features

2022 **Image Captioning Model**, Task on Deep Learning Course at MIPT.
Neural network for image captioning based on inception_v3, LSTM and Attention

Achievements

2024 **1/2 ICPC - Northern Eurasia Finals**, 2rd degree diploma, place 53/269.

2023 **1/2 ICPC - Northern Eurasia Finals**, 3rd degree diploma, place 74/276.

2023 **All-Russian university student Olympiad "I Am a Professional"**, Maths - 1st degree, AI - 2nd degree.

2023 **All-Russian university student Olympiad "The Higher League"**, Applied Maths and Computer science - 2nd degree.

2020 **1/4 ICPC - Moscow regional contest**, 3rd degree diploma, place 48/277.

Languages

English C1-C2 Upper-Intermediate *(MSc program completely in English, study ML papers regularly)*

Russian Native Speaker