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
- ML, DL, Numerical Linear Algebra, Optimization methods

2021 – 2024   **Machine learning developer academic program**, *Yandex School of Data Analysis*.
- Classical ML and DL, RL, Advanced courses CV and NLP, Bayesian Statistics

2023 – 2024   **One-year program in Finance and Quantitative analysis**, *School of Quants*.
- Stochastic Calculus, Advanced Statistics, Financial products and Markets, Machine learning, Financial programming on C++ and Python

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
- Graduate qualifying bachelor's thesis - see below in **Projects**

Working experience

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 business tasks

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   Experienced at implementing different ML/DL models: Classical ML, clustering, time series models, bayessian ML, DL: CNN, RNN, Attention, Diffusion

SWE   Familiar with support and development of big distributed services

Python   pytorch, transformers, catboost/xgboost/lightgbm, sklearn, numpy, scipy, pandas, matplotlib

Other   C++, Go, C, Linux & Bash & Git, 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 in 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 on IRTP MIPT.
Neural network for image captioning based on inception_v3, LSTM and Attention

2020   **Mini-library for finite automata**, Project for Formal Languages Course at MIPT.
NFA to DFA, complete DFA and minimal DFA conversions

Achievements

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