

# 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 [ABBY](#): 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 **ML Intern**, [Metuum.AI](#) - Weather Experiments Team, Python, TensorFlow, SQL.  
2022
  - Conducting experiments to improve weather short-term prediction models for precipitation (nowcasting)
  - Analysis of weather forecasting for business tasks
- summer **SWE Intern**, [Yandex](#) Weather Back-end Team, C++, Python, Go, Google Protobuf.  
2021
  - 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, bayesian 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,  $\text{\LaTeX}$

## 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  
Russian Native Speaker

(MSc program completely in English, study ML papers regularly)