

# Nikita Semenov

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## WORK EXPERIENCE

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Skolkovo Institute of Science and Technology  
(Skoltech)

2/2022 — 8/2022

*Junior research engineer*

### **Framework to automatic neural architecture search (NAS) for VTB**

Responsibilities:

- Research NAS approaches
- Design searchspace
- Testing algorithms
- Integration working solutions into framework
- Writing documentation to framework

Algorithm stack:

- Hyperband, differentiable NAS, train-free NAS, bayesian networks
- Transformers, RNNs, ConvNets

Tech stack:

- Python, Pytorch, pandas, numpy, seaborn, sphinx
- Docker, VS code, Git

Project status: all tasks completed

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2/2022 — 6/2022

*Junior research engineer*

### **Emotion recognition via EEG**

Responsibilities:

- Research EEG preprocessing
- Feature selection
- Design models for small data
- Analysis of data via end-to-end pipeline
- Recommendation about experiment design

Algorithm stack:

- FFT, Wavelet analysis, ICA, Notch and Butterworth filters
- EEGNet, gradient boosting, NeuralODE, MRMR

Tech stack:

- Python, Pytorch, pandas, numpy, mne, pywavelets
- JupyterLab

Project status: this project was of a research nature in order to indentify possible directions for development and

commercialization. Despite the fact that the results obtained indicate the possibility of continuing research, the potential for commercialization was considered insufficient, and the project was frozen

Moscow State University

24/8/2022 — 31/8/2022

*Lecturer*

**Student summer school by "Intellect" foundation and MSU department of mechanics and mathematics**

Responsibilities:

- Writing 11 lectures and seminars to course
- Giving my lectures and seminars to students

Github: [https://github.com/Serega200010/MM\\_summerschool\\_2022](https://github.com/Serega200010/MM_summerschool_2022)

Freelance

8/2020 — until now

*Online Tutor*

Prepare students to EGE and olympiads

## SKILLS

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- Python (Pytorch, Pandas, Numpy, Sklearn, Matplotlib, Seaborn, MNE, etc.)
- Classical ML, Deep Learning, RL, NAS
- Many parts of higher mathematics
- Working environment (VS code, Docker, Github, Anaconda, Sphinx, etc.)
- Fluently reading any scientific literature on English, speaking English
- Time management, self-organization, online working
- Transformers, ConvNets, GANs, NAS, RL, RNN, etc.

## EDUCATION

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Department of mechanics and mathematics

9/2019 — until now

*Moscow State University*

I took an academic leave, so now I'm the third year student

## QUALIFICATIONS

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Second place at the "Leaders of Digital Transformation 2021" hackathon

Third place at the "Digital Breakthrough 2021: Fintech" hackathon

GitHub: <https://github.com/zer0o0ne>