

# Iakov Grigoryev

SOFTWARE ENGINEER · MACHINE LEARNING RESEARCHER · MATHEMATICIAN

Moscow, Russia

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*“Ready to develop and improve in any direction.”*

## Education

### New Economic School (NES)

Moscow, Russia

MASTER OF ARTS IN ECONOMICS

2019 – 2021 expected

- GPA: 4.8/5.3
- Term Paper: [Using NNs and Other ML Algorithms with Non-Standard Loss Functions in Realized Volatility Forecasting](#)
- Projects:
  - [International Macroeconomics Project](#) (Python, 2020)
  - [Gopinath-Stein \(2018\) Paper Replication](#) (Python, 2020)

### Lomonosov Moscow State University (MSU)

Moscow, Russia

BACHELOR IN APPLIED MATHEMATICS AND COMPUTER SCIENCE (CUM LAUDE), SYSTEM ANALYSIS DEPARTMENT

2015 – 2019

- GPA: 4.95/5
- Thesis: [Properties of Quadratic Mappings](#) (in Russian)
- Term Paper: [Nonlinear Dynamics and Limit Behavior of Discrete and Continuous Dynamic Systems in 3D Space](#) (in Russian)
- Undergraduate Practice (in collaboration): [Ellipsoidal Toolbox](#) (Python, 2018)
- Projects:
  - [Toolboxes](#) (Python, 2019, in Russian)
  - [Stochastic Analysis and Modeling](#) (MATLAB, 2018, in Russian)
  - [Ellipsoidal Estimates for a Backward Reach Set](#) (MATLAB, 2018, in Russian)
  - [Optimal Control in Dynamic Problems](#) (MATLAB, 2018, in Russian)
  - [Single-Player Game “Terrain Simulator”](#) (C++, 2017)
  - [Unix Command Shell Emulator](#) (C, 2016)
  - [Graph Implementation](#) (C, 2016)

## Skills

**Programming** Python, C, C++, Java, MATLAB, SQL, LaTeX

**Software / Tools** Git, Linux, JetBrains Software, Numba, Ray, AWS, Docker, REST API

**Machine Learning** Statistics, Deep Learning (PyTorch, Tensorflow, Keras), Reinforcement Learning

**Languages** Russian (native), English (Upper Intermediate)

## Experience

### LivLet

London, United Kingdom (remote)

MACHINE LEARNING RESEARCHER AND ENGINEER

2020 – 2021

- Implemented a NER-based algorithm to extract various fields from photoed and scanned invoices and receipts (such as date and total cost).
- Made an integration with AWS (S3, CLI, Textract) to build an API.
- Proposed and tested a lot of ideas to use ML algorithms in the project, such as:
  - text classification of user writings to suggest adding a corresponding tag,
  - speech-to-text and text-to-speech systems.
- Led one person who helped me with routine jobs and testing.
- Had experience in a startup.

### Allied Testing

Moscow, Russia

SOFTWARE ENGINEER AND MATHEMATICIAN

2019

- Optimized an algorithm that processes data of a very high (but finite) dimension.
- Transferred the algorithm from MATLAB to Python and optimized it further using PyTorch, Numpy, Scipy, Ray, Numba and Cython.
- Results: original algorithm was accelerated by a factor of  $\approx 200$ .

### PIM Solutions

Moscow, Russia

FINANCIAL ANALYST

2015 – 2018

- Participated in the derivation and testing of formulas for various calculations, did some kind of A/B testing.
- Did various kinds of normalization, preprocessing and analysis of big data.
- Built some financial models.

# Honors & Awards

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## OLYMPIADS

2019	<b>Winner, 1st degree,</b> NES MAE Olympiad	<i>Moscow, Russia</i>
2019	<b>Winner, 2nd degree,</b> NES MAF Olympiad	<i>Moscow, Russia</i>
2019	<b>Winner, 3rd degree,</b> MSU Universiade in Applied Mathematics and Computer Science	<i>Moscow, Russia</i>
2019	<b>Winner, 3rd degree,</b> HSE Olympiad in Applied Mathematics and Computer Science	<i>Moscow, Russia</i>
2015	<b>Winner, 3rd degree,</b> ITMO Open Informatics Olympiad	<i>Moscow, Russia</i>
2015	<b>Winner, 2nd degree,</b> Lomonosov Olympiad in Computer Science	<i>Moscow, Russia</i>
2015	<b>Winner, 3rd degree,</b> BMSTU Olympiad in Physics	<i>Moscow, Russia</i>
2015	<b>Winner, 2nd degree,</b> BMSTU Olympiad in Mathematics	<i>Moscow, Russia</i>

## SCHOLARSHIPS

2020 – 21	<b>Recipient,</b> NES Alumni Association Scholarship	<i>Moscow, Russia</i>
2017 – 18	<b>Recipient,</b> Increased State Academic Scholarship (MSU, for academic excellence)	<i>Moscow, Russia</i>
2015 – 17	<b>Recipient,</b> Moscow Government Scholarship	<i>Moscow, Russia</i>