

# Danila Biktimirov

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## PERSONAL STATEMENT

As an undergraduate student, I have been studying theoretical computer science and deep neural network applications. Currently, I am conducting research on various methods and algorithms used in bioinformatics and computational biology. Specifically, I am working on a term paper that focuses on the diagnosis of phlebology diseases using deep learning methods.

I plan to focus my postgraduate studies in the field of bioinformatics with a particular focus on the application of artificial intelligence (AI).

## EDUCATION

*B.Sc. in Applied Computer Science* Oct. 2022 – Current  
Neapolis University Pafos, Paphos, Cyprus

- Recipient of the JetBrains Company Sponsor Grant for Free Education
- Relevant courses: Software Project Management, Software Engineering, Principles of Cybersecurity, Introduction to Innovation and Entrepreneurship

*B.Sc. in Applied Mathematics and Informatics* Aug. 2020 – Current  
HSE University, Moscow, Russia

- Cumulative GPA: 6.8/10
- Minor: Intelligent Medical Information Management and Processing Systems
- Focus areas: theoretical informatics and deep learning application in nature science
- Relevant courses: Intelligent systems in medicine, Deep Learning, Machine Learning, Statistical Learning Theory, Theory of Computation, Computer Architecture and Operating Systems, Algorithms and Data Structures and strong math courses

*Bachelor of Mathematics (incomplete)* Aug. 2019 – May 2020  
HSE University, Moscow, Russia

- Cumulative GPA: 7.2/10
- Focus areas: theoretical informatics and topology
- Relevant courses: Calculus, Discrete Mathematics, Probability Theory and Mathematical Statistics, Number Theory, Linear Algebra, Algebra

*High school* Aug. 2016 – May 2019  
Saint Petersburg Lyceum 239, Saint Petersburg, Russia

- The lyceum has been named the best school in Russia in many years
- Specialized in math and physics
- Attendend Extracurricular Biology Classes organized by SPbU
- Biology (A), Mathematics (A), Chemistry (A)

## EMPLOYMENT HISTORY

**Automatica Service – Intern** | *Python* July 2021 – Aug. 2021

- Optimized ML algorithms through code refactoring using Python
- Applied asynchrony to optimize system performance

## PROJECTS

### Prediction of phlebological diseases using PINN and bifurcation analysis

- Deep Learning Research Coursework at AMI HSE University
- Proposed a solution for the limited and imbalanced datasets commonly encountered in medical deep learning algorithms through data augmentation with GANs
- Confirmed the effectiveness of the proposed paradigm and standard GAN model combination through computational experiments
- Expertise in phlebology, cardiovascular system graphs, MRI-scans, data augmentation, PINN, and GANs

### Chaotic Time Series Prediction

- Machine Learning Research Coursework at AMI HSE University
- Chaotic time series; multi-step prediction; predictive clustering; predictable and non-predictable points; a horizon of predictability

### Automorphism Groups and Infinite Transitivity on Affine Plane

- Theoretical Math Research Paper at Mathematics Department of HSE University
- Polynomial mapping; Actions of automorphism groups; AMC Theorem

## TECHNICAL SKILLS

Strong knowledge of Python and many DL methods (CNNs, RNNs, LSTMs, GANs) - used for courseworks and personal projects

**Programming languages:** Python, C, C++, bash, SQL, Assembler

**OS/Developer Tools:** MacOS, Linux, Windows, Git, Docker, Clion, PyCharm, Eclipse, Jupyter Notebook

**Frameworks (ML/DS):** Scikit Learn, Pandas, Numpy, Seaborn, Matplotlib, Pytorch, Tensorflow, Theano

## ACHIEVEMENTS AND OTHER

- Winner of SPbU Math Competition (2019) in which at least 3,000 students from 20 or more subjects of Russia took part
- Prizewinner of several all-Russian Math Competitions, including MIPT Math Competition (2018, 2019), United Intercollegiate Maths Olympiad (2019) and other
- Currently working as a private Maths tutor and Advanced Calculus teacher assistant in HSE University
- Volunteering experience in organizing various math competitions for schoolchildren
- Numerous programming and bioinformatics online courses