

SERGEI VOLODIN

Birth date: 3 October 1994

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Russia, Moscow

EDUCATION

Moscow Institute of Physics and Technology, undergraduate student *Sep 2012 – June 2017*
Department of Control and Applied Mathematics,
sub-department of Intellectual Systems and Data Analysis
GPA for 7 semesters: 8.98/10

RESEARCH INTERESTS

1. Artificial Intelligence
2. Machine Learning
3. Optimization

RESEARCH EXPERIENCE

Skoltech, Center for Energy Systems Sep 2016 – Present
Research Intern *Russia, Moscow*

- Worked on the Power Flow Feasibility problem with Assist. Prof. Anatoly Dymarsky and Dr. Elena Gryazina
- Designed (partially) and implemented the algorithm for cutting convex parts of the image in Matlab
- Examined the structure of the set of nonconvexities
- Results: *article expected in 2017*

MIPT, sub-department of Data Analysis Feb 2016 – July 2016
Student *Russia, Moscow*

- Worked on the ligand-receptor interaction problem using Machine Learning approach
- Implemented Probabilistic Classifier Chains algorithm using scikit-learn library
- Assessed this method as infeasible for the task
- Results: an article in ITAS proceedings

MIPT, sub-department of Theoretical Mechanics Oct 2012 – Feb 2013
Technician *Russia, Moscow*

- Worked on the article “Janibekov’s effect and the laws of mechanics” with A.G. Petrov
- Designed and implemented numerical simulations for Euler’s rotation equations
- Checked correctness of the approximation presented in the article using numerical simulation and symbolic computations in Wolfram Mathematica
- Results: an article in Doklady Akademii Nauk

PUBLICATIONS

Probabilistic prediction of nuclear receptors biological activity, **Sergey Volodin**, Maria Popova, Vadim Strijov, ITAS 2016

Janibekovs effect and the laws of mechanics, A.G. Petrov, **S.E. Volodin**, 2013, published in Doklady Akademii Nauk, 2013, Vol. 451, No. 4, pp. 399403.

CONFERENCES

Information Technologies and Systems (Saint-Petersburg, Repino, September 2016)

Speaker

Eights Traditional school Control, Information, Optimization (Saint-Petersburg, Repino, June 2016)

Poster presenter

SCHOLARSHIPS

“Abramov fund scholarship” for excellent grades (2014)

SKILLS

Programming: C/C++, Python, Matlab, scikit-learn, numpy, Mathematica, AVR C/C++, x86 assembly (nasm), Microsoft SQL

Languages: Russian (native), English (B2)

COURSES

Getting Started with Deep Learning (NVIDIA Deep Learning Workshop, MIPT, Feb 2017)

Approaches to Object Detection using DIGITS (NVIDIA Deep Learning Workshop, MIPT, Feb 2017)

OLYMPIADS AND HACKATHONS

DeepHack.RL hackathon (Deep RL for Atari games), MIPT, 2017. 4'th place (z-score)

Sixteen interuniversity programming olympiad, Vologda, 2013, successful performance

<http://olympiads.vologda-uni.ru/interuni/>

DevCup, Russia, Moscow 2013, 2nd place (with BBC&N team)

<https://vk.com/devcup>

PROFESSIONAL EXPERIENCE

ITBrat

July 2015 – Feb 2016

Developer

Russia, Moscow

- Developed High Frequency Trading (cross-border arbitrage) application in C++, from initial discussion with the team to deployment and supporting
- Added low-level networking to the project using Solarflare OpenOnload library and hardware
- Designed and supported the environment for the algorithm: build stage, version control, performance analysis using network dumps

Claustrophobia

July 2014 – Feb 2015

Developer

Russia, Moscow

- Created system architecture for the real-world escape room game
- Implemented the solution using C++ (Atmel AVR, Linux)
- Results description: <https://habrahabr.ru/company/technoworks/blog/258585/> (in Russian)

HOBBY

Quadcopter stabilization

2012 – 2014

- Worked with TechnoWorks team (Arshavir Ter-Gabrielyan and others)
- Developed the algorithm for stabilization a quadcopter drone using C++ (Atmel AVR, Linux)
- Conducted the analysis of launches to improve flying quality
- Results description: <https://habrahabr.ru/company/technoworks/blog/216437/> (in Russian)