SERGEI VOLODIN

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EDUCATION

Moscow Institute of Physics and Technology, BSc — Sep 2012 – Jun 2017
Department of Control and Applied Mathematics
Intellectual Systems and Data Analysis
Selected courses: Calculus, Functional analysis, Machine Learning (introduction), Random processes, Convex Optimization. GPA: 8.8/10

École Polytechnique Fédérale de Lausanne, MSc — Sep 2017 – Jun 2019
Computer Science
Courses taken: Set theory, Machine Learning, Philosophy of Life Sciences, Functional Programming, Software Engineering

RESEARCH INTERESTS

1. Artificial Intelligence, Machine Learning
2. Mathematical Optimization

RESEARCH EXPERIENCE

EPFL, CHILI lab — Sep 2017 – present
Research Assistant — *Lausanne, Switzerland*

- Created a website collecting a dataset for French BHK test to help dysgraphic children
- Researched into ways of adding Augmented Reality to the Cellulo project

Skoltech, Center for Energy Systems — Sep 2016 – Jul 2017
Research Intern — *Moscow, Russia*

- Designed and implemented the algorithm for cutting convex parts of the image of a quadratic map
- Examined the structure of the set of nonconvexities in Matlab

MIPT, chair of Data Analysis — Feb 2016 – Jul 2016
Undergraduate student — *Moscow, Russia*

- Compared machine learning algorithms for the ligand-receptor interaction problem
- Implemented Probabilistic Classifier Chains algorithm using scikit-learn library

MIPT, chair of Theoretical Mechanics — Oct 2012 – Feb 2013
Technician — *Moscow, Russia*

- Designed and implemented numerical simulations for Euler's rotation equations
- Checked soundness of the approximation using symbolic computations in Wolfram Mathematica

PUBLICATIONS

Volodin S., Popova M., Strijov V. Probabilistic prediction of nuclear receptors biological activity. Proceedings of ITaS, 2016. PDF

Petrov A., **Volodin S.** Janibekovs effect and the laws of mechanics.
Doklady Akademii Nauk, 2013. PDF

CONFERENCES

- Information Technologies and Systems (Saint-Petersburg, Repino, 2016), *Speaker*
- School "Control, Information, Optimization" (Saint-Petersburg, Repino, 2016), *Poster presenter*
- DeepBayes school on Bayesian methods in Deep Learning (Moscow, 2017), *Participant*

SKILLS

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

Environment: Git, SVN, Debian Linux

Languages: Russian (native), English (TOEFL iBT 112/120)

SCHOLARSHIPS

- Abramov Fund's scholarship for excellent grades (2014)
- Research Scholars program at EPFL CHILI Lab (2017)

OLYMPIADS AND HACKATHONS

- DeepHack.RL hackathon (Deep RL for Atari games), MIPT, Moscow, Russia, 2017. 4th place
- DevCup software development competition, Moscow, Russia, 2013. 2nd place

WORK EXPERIENCE

ITBrat Jul 2015 – Feb 2016
Software Engineer *Moscow, Russia*

- 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

EscapeControl Jul 2015 – Feb 2016
Software Engineer *Moscow, Russia*

- Created system architecture for the real-world escape room games
- Implemented the solution using C++ (Atmel AVR, Linux)
- Created a startup selling software & hardware framework for real-world escape games
- Managed a team of two web developers
- Ten solutions sold, currently running in different countries

PROJECTS

Quadcopter stabilization

- Developed an algorithm in C++ for stabilization of a quadcopter drones
- Conducted the analysis of launches to improve flying quality
- Results were published in the Habrahabr CS blog

VOLUNTEERING

Anti-corruption foundation (Alexey Navalny)

- Donator (2015–2017)
- Rally participant (June 2017)
- Agitation volunteer (July 2017)