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
GPA: 8.8/10

RESEARCH INTERESTS

1. Artificial Intelligence, Machine Learning

2. Mathematical Optimization

RESEARCH EXPERIENCE

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)

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)