SERGEI VOLODIN

Birth date: 3 October 1994
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Russia, Moscow

EDUCATION

Moscow Institute of Physics and Technology, BSc 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, Dr. Elena Gryazina and Prof. Boris T. Polyak
· Designed (partially) and implemented the algorithm for cutting convex parts of the image in Matlab
· Examined the structure of the set of nonconvexities

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
· 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)

OLYMPIADS AND HACKATHONS

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

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

EscapeControl July 2015 - Feb 2016
Developer *Russia, Moscow*

- 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 team of 2 web developers
- Ten copies sold, currently running in different countries
- Solution description: `habr.ru/p/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: `habr.ru/p/216437` (in Russian)