SERGEI VOLODIN

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Rue du Verneret 10A, 1373 Chavornay, Vaud, Switzerland

EDUCATION

École Polytechnique Fédérale de Lausanne
Sep 2017 – Jun 2019
MSc in Computer Science   Lausanne, Switzerland

- Relevant courses: Set Theory, Machine Learning, Functional Programming (Scala), Software Engineering (Android, Scrum).

Moscow Institute of Physics and Technology
Sep 2012 – Jun 2017
BSc in Computer Science   Moscow, Russia

- Relevant courses: Algorithms and Data Structures, Functional Analysis, Random Processes, Convex Optimization, Machine Learning, NLP, Deep Learning.
- GPA: **4.84**/5.00

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 (CAQM) 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
Research project   Moscow, Russia

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

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

- Worked on the paper "Janibekov's effect and the laws of mechanics" with A.G. Petrov
- Designed and implemented numerical simulations for Euler's rotation equations
- Checked soundness of the approximation using symbolic computations in Wolfram Mathematica

- The results were published in Doklady Akademii Nauk

PUBLICATIONS

Petrov A., **Volodin S.** ☑ Janibekov's effect and the laws of mechanics. Doklady Akademii Nauk, 2013.

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), *Practical sessions participant*

SKILLS

Scientific programming: scikit-learn (PCC project), MATLAB (CAQM project), Mathematica (Theoretical mechanics), TensorFlow, Theano (DeepHack), R (course)

Programming: C/C++ (HFT), Python (EscapeControl), AVR C++ (EscapeControl), Qt (Quadcopter), Scala, Java (EPFL), nasm, MS SQL (MIPT)

Frameworks: Qt, Django, Android Studio

Environment: Git, Bash, Debian Linux, Ubuntu

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

SCHOLARSHIPS

☑ Research Scholars at EPFL CHILI Lab (2017)

☑ Abramov Fund's, for excellent grades (2014)

OLYMPIADS AND HACKATHONS

☑ DeepHack.RL hackathon (Deep RL for Atari games), MIPT, Moscow, Russia, 2017. ☑ 4th place.

☑ Sixteenth interuniversity programming olympiad, Vologda, 2013

☑ DevCup software development competition, Moscow, Russia, 2013. 2nd place

PROJECTS

☑ TechnoWorks   2012 – 2015
Quadcopter stabilization project

- Developed an algorithm in C++ for stabilization of a quadcopter drones. ☑ Repository
- Conducted the analysis of launches to improve flying quality
- Results were ☑ published in the Habrahabr CS blog
- Managed the ☑ community page at a social network

WORK EXPERIENCE

ITBrat   Jul 2015 – Feb 2016
Sw. Eng.: C++, pthread, Onload Moscow, Russia

- Developed high-frequency trading (cross-border arbitrage) application 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
Sw. Eng.: C++, AVR, Linux   Moscow, Russia

- Created a startup selling software & hardware ⬈ framework for real-world escape games
- Created ⬈ system architecture for the real-world escape room games
- Managed a team of two web developers
- Ten solutions sold, currently running in different countries

VOLUNTEERING

⬈ **Anti-corruption foundation**   2015 – 2017
Moscow, Russia

- Door-to-door campaign
- Street volunteer
- Rally participant