SERGEI VOLODIN

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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 Applied Mathematics   *Moscow, Russia*

- 🔗 Major in **Machine Learning**
- Relevant courses: Algorithms and Data Structures, Functional analysis, Random processes, Convex Optimization.
- GPA: **4.84**/5.00

RESEARCH INTERESTS

1. Artificial Intelligence; Machine Learning; Reinforcement 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

PUBLICATIONS

Petrov A., **Volodin S.** 🔗 Janibekovs 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: numpy, 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, SVN

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.

🔗 Sixteen interuniversity programming olympiad, Vologda, 2013

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

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

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

VOLUNTEERING

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

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