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: Machine Learning, Set Theory, 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*

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

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