# SERGEI VOLODIN

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## EDUCATION

### École Polytechnique Fédérale de Lausanne
Sep 2017 –

*MSc in Computer Science   Lausanne, Switzerland*

- Relevant courses: Machine Learning, Software Engineering, Unsupervised and Reinforcement Learning in Neural Networks, Biological modeling of neural networks, Random graph theory, Functional Programming, Set Theory
- GPA: **5.61**/6.00

### Moscow Institute of Physics and Technology
Sep 2012 – Jun 2017

*BSc in Computer Science          Moscow, Russia*

- Relevant courses: Machine Learning (intro), Algorithms and Data Structures, Convex Optimization, Random Processes, Functional Analysis
- GPA: **4.84**/5.00

## RESEARCH INTERESTS

1. Artificial Intelligence; Machine Learning
2. Mathematical Optimization
3. Robotics

## RESEARCH EXPERIENCE

### EPFL, CHILI lab          Sep 2017 – present
*Research Assistant          Lausanne, Switzerland*

- Created ☑ a library for seamless augmented reality using OpenCV and Qt
- Designed learning activities involving augmented reality and robots

### Skoltech, Energy Systems Sep 2016 – Jul 2017
*Research Intern          Moscow, Russia*

- Examined in MATLAB the structure of the set of boundary nonconvexities of an image of a quadratic map
- Designed and implemented ☑ the CAQM library which gives approximate solutions to a few problems involving quadratic maps

### MIPT, Theoretical Mechanics dpt.
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*
- ☑ DeepBayes school on Bayesian methods in Deep Learning (Moscow, 2017), *participant*
- ☑ P.A.I.S.S. (AI Summer School) (INRIA Grenoble, 2018), *participant,* ☑ *selected to receive financial help*

## SKILLS

**Scientific programming:** Keras, TensorFlow, Theano, scikit-learn, MATLAB, Mathematica, R

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

**Programming:** C/C++, Python, AVR C++, Scala, Java, nasm

**Frameworks:** Qt/QML, Django, Android Studio

**Environment:** Git, Bash, Debian Linux

## 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.

## PROJECTS

### ☑ TechnoWorks          2012 – 2015
*Quadcopter stabilization project*

- Developed ☑ an algorithm in C++ for stabilization of a quadcopter drone
- 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

### ☑ EscapeControl          Jul 2015 – Feb 2016
*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
- More than fifteen solutions sold, currently running in different countries

## VOLUNTEERING

### ☑ Anti-corruption foundation          2015 – 2017
*Moscow, Russia*

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