

## PERSONAL INFORMATION

**Sergei Volkov** [github.com/taranarmo](https://github.com/taranarmo) [gitlab.com/taranarmo](https://gitlab.com/taranarmo) [www.linkedin.com/in/taranarmo](https://www.linkedin.com/in/taranarmo) **ORCID** [0000-0002-5385-1541](https://orcid.org/0000-0002-5385-1541)**Date of birth** Dec 16, 1990

## WORK EXPERIENCE

Aug 2023 – Feb 2024

**Data Scientist**

Crocus Labs GmbH

*Software development, Software architecture, Product design, Project management, Testing, Team leading*

*I was hired to build an ETL for collecting data from smart lamps for greenhouses. However, upon my arrival, a complete redesign of the AWS architecture was necessary. I set up CI/CD for the frontend, wrote build instructions for many components, and learned how to set up and deploy various AWS services (API Gateway, DynamoDB, IoT Core, Amplify, etc.). In parallel, I developed a simple Python app to calculate light density from the lamp as a sum of LED chips based on lamp geometry and LED chips' ray files. During the design of the AWS architecture, I also participated in database design. Just before the implementation of the new AWS structure, the company decided to move to a self-hosted solution due to weak network coverage on farms, thus canceling the AWS implementation. I created a prototype of a Linux host with containers communicating via IoT to mimic lamps, but the company decided to cancel the development of smart lamps and focus on creating their own LED dies. Since I was still on probation, my employment was terminated.*

Jun 2021 – Mar 2023

**PhD Student**

Leibniz-Institut für Gewässerökologie und Binnenfischerei (IGB Berlin)

*Research design, Data processing, Fieldwork, Linux systems administration, DevOps*

*I was hired to contribute to joint research on biomass sinking in turbulent stratified environments. I deployed probes, collected and processed data, and participated in biological field and lab work. The main activity was managing and using a stereoscopic video recorder and the MATLAB package for video processing. The package was initially non-functional with obscure code and dependencies on an outdated OpenCV interface. I used Docker to build an environment with MATLAB, compiled all components (including OpenCV with custom build flags), and translated the GUI with an X server on the host machine. Falling behind schedule for a successful thesis defense, I decided to quit.*

Oct 2020 – Feb 2023

**Data QA**

Playrix

*Data analysis, Validation, ETL design, Manual and automated QA*

*I was responsible for the data quality of new tables created by the data engineering team and data migration to the new ETL and DBMS. I verified Tableau dashboards based on game/product data and some based on marketing data. Writing complex SQL queries processing millions of rows was my daily routine. I led a small team of QA engineers, distributed and prioritized tasks, and provided onboarding and mentoring.*

Mar 2020 – Oct 2020

**QA Engineer**

Playrix

*Manual QA, Automation, Teaching, Testing documentation writing, MitM traffic sniffing, Statistical analysis*

Nov 2019 – Feb 2020

## Data Analyst

Playrix

*Data analysis, Automation, User tracking events design, Reporting and presenting to stakeholders*
*SQL, Python, Analytics, DataViz, Big Data*

May 2016 – Jul 2020

## Teaching Assistant

Petrozavodsk State University

*Educational program design, Lecturing, Teaching*
*Thermodynamics, Heat transfer, and other courses*

Jan 2016 – now

## Research Assistant

Northern Water Problems Institute

*Data analysis, Fieldwork, Experiment design, Data processing frameworks development, Academic writing, editing, and typesetting*

## EDUCATION AND TRAINING

2010 – 2015

## Specialist Degree in Energy Supplies

Petrozavodsk State University

## PERSONAL SKILLS

Mother tongue Russian

Other languages

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	C1	C1	C1	C1	C1
German	B1	B1	A2	A2	B1

Levels: A1 and A2: Basic user – B1 and B2: Independent user – C1 and C2: Proficient user  
[Common European Framework of Reference for Languages](#)

Communication skills

- Presenting
- Communicating with stakeholders
- Public speaking
- Teaching/Mentoring
- Feedback sharing
- Active listening
- Remote team building

Organisational / managerial skills

- Agile, Kanban, Scrum
- Managing small teams of developers
- Task management and distribution
- Project management

Digital competences

SELF-ASSESSMENT				
Information Processing	Communication	Content creation	Safety	Problem solving
Proficient user	Proficient user	Proficient user	Proficient user	Proficient user

[Digital competences - Self-assessment grid](#)

- Computer skills**
- **Development:** *Python:* NumPy, Pandas, SQLAlchemy, Matplotlib, concurrency, Plotly  
*SQL:* Analytic/window functions, query optimization  
*Data:* Spark, Snowflake, dbt, Tableau, Looker, Plotly Dash, Spreadsheets  
*NoSQL:* DynamoDB, MongoDB  
*Linux:* Bash, system management, SSH, Nix  
*Containers:* Docker, systemd-nspawn, LXC, Kubernetes, chroot  
*IaC:* Terraform, Pulumi, Nix  
*General:* Git, Vim, Emacs, Jupyter  
*CI/CD:* GitHub Actions, TeamCity, GitLab  
*Cloud:* AWS, GCP  
*Typesetting:* Markdown, LaTeX, Pandoc  
*Other:* Julia, MATLAB, minor knowledge of JS, C/C++
  - **Analytical:** AB test design and analysis  
 Cohort analysis  
 Time-series analysis  
 Descriptive and inferential statistics  
 Machine learning basics  
 Data wrangling
  - **Research:** *Fieldwork:* Organizing, sampling, working with probes, logistics, hand and power tools  
*Writing:* Academic writing, editing, publishing, proofreading  
*Data processing:* Writing ad-hoc frameworks, automation, visualization

## CERTIFICATIONS AND LICENSES

Driving licence **European Driving License: B, C**

### 2017 Machine Learning

Stanford University on Coursera

Certificate available at <https://www.coursera.org/account/accomplishments/verify/U4VGJWXFGMS9>

## ADDITIONAL INFORMATION

### Projects

2015 – 2017 **Lake Onego: Life Under the Ice**  
 NWPI

2021 – 2023 **Lake Pycnoclines Trap Organic Particles Forming Hot Spots of Accelerated Carbon Cycling in the Water Column (PycnoTrap)**  
 IGB Berlin

### Voluntary

2013 – 2015 **Garbage Collection**  
 On multiple sites near Onego Lake - Petrozavodsk, Russia

2011 – now **OpenStreetMap**  
 Data surveys and contribution - Republic of Karelia, Russia

### Thesis

2015 **Noniterative Heat Exchanger Calculation**  
 Supervisor: Professor Sergei Bogdanov  
 The thesis proposes a direct analytical calculation procedure for heat exchanger design, avoiding the use of optimization algorithms

### Publications

- 2021 **Full Reynolds Stress Tensor of Convective Turbulence Estimated with Paired Acoustic Doppler Current Profilers**  
S. Bogdanov, G. Kirillin, S. Volkov, G. Zdrovennova
- 2019 **Fine scale structure of convective mixed layer in ice-covered lake**  
S. Volkov, S. Bogdanov, R. Zdrovennov, G. Zdrovennova, A. Terzhevik, N. Palshin, D. Bouffard, G. Kirillin
- 2019 **Under-ice convection dynamics in a boreal lake**  
D. Bouffard, G. Zdrovennova, S. Bogdanov, T. Efremova, S. Lavanchy, N. Palshin, A. Terzhevik, L. Vinnå, S. Volkov, A. Wüest, R. Zdrovennov, H. Ulloa
- 2019 **Structure and dynamics of convective mixing in Lake Onego under ice-covered conditions**  
S. Bogdanov, G. Zdrovennova, S. Volkov, R. Zdrovennov, N. Palshin, T. Efremova, A. Terzhevik, D. Bouffard
- 2018 **Albedo of a Small Ice-Covered Boreal Lake: Daily, Meso-Scale and Interannual Variability on the Background of Regional Climate**  
G. Zdrovennova, N. Palshin, T. Efremova, R. Zdrovennov, G. Gavrilenko, S. Volkov, S. Bogdanov, A. Terzhevik

In compliance with the art. 13 GDPR 679/16, I hereby authorize the recipient of this document to use and process my personal details for the purpose of recruiting and selecting staff.