europass

Curriculum vitae

PERSONAL INFORMATION

Sergei Volkov

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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 The package was initially non-functional with obscure code and dependencies on an outdated OpenCV interface.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	
C1	C1	C1	C1	C1
B1	B1	A2	A2	B1

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. Zdorovennova

2019   **Fine scale structure of convective mixed layer in ice-covered lake**
S. Volkov, S. Bogdanov, R. Zdorovennov, G. Zdorovennova, A. Terzhevik, N. Palshin, D. Bouffard, G. Kirillin

2019   **Under-ice convection dynamics in a boreal lake**
D. Bouffard, G. Zdorovennova, S. Bogdanov, T. Efremova, S. Lavanchy, N. Palshin, A. Terzhevik, L. Vinnå, S. Volkov, A. Wüest, R. Zdorovennov, H. Ulloa

2019   **Structure and dynamics of convective mixing in Lake Onego under ice-covered conditions**
S. Bogdanov, G. Zdorovennova, S. Volkov, R. Zdorovennov, 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. Zdorovennova, N. Palshin, T. Efremova, R. Zdorovennov, G. Gavrilenko, S. Volkov, S. Bogdanov, A. Terzhevik

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