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 (for further analysis) but upon my arrival the complete redesign of the AWS architecture was necessary. I started by setting up CI/CD for the frontend and writing building instructions for many components as well and learning how to set up and deploy different AWS services (API gateway, DynamoDB, IoT core, Amplify etc). In parallel I developed the simple Python app to calculate light density from the lamp as a sum of LED chips based on lamp geometry and LED chips' rayfiles. During design of AWS acrhitecture I also participated in databases design. Just before the start of implementation of the new AWS structure the company desided to go to self-hosted solution (due to weak network coverage on farms) thus the implementation was canceled. I created a simple prototype of the Linux host and bunch of containers communicating via IoT to immitate lamps but the company suddenly desided to cancel development of the smart lamps and focus on creation of their own LED dies. And as soon as I was still on a probation period, my employment was terminated.

Jun 2021 – Mar 2023

PhD Student

Leibniz-Institut für Gewässerökologie und Binnenfischerei (IGB Berlin)

Research design, Data processing, Field work, Linux systems administration, DevOps

I was hired carrying a physical part of the joined research on biomass sinking in the turbulent stratified environment. I had to deploy the probes, collect and process their data and participate in biological field and lab work. The main activity was to manage and use a stereoscopic video recorder and the MATLAB package for video processing. Though when I started the package didn't work, the code was obscure (manyfolded classes without documentation) and relied on the third party interface to OpenCV lib which development was stopped. I had to use Docker to build an environment with MATLAB inside to compile all the components (including OpenCV with custom build flags) and translate the GUI with X server on the host machine. I was falling behind the schedule for a successful thesis defense and I decided to quit the job.

Oct 2020 – Feb 2023

Data QA

Playrix

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

I was responsible for data quality of all new tables created by data engineering team, all the data duting migration to the new ETL and new DBMS. Also I checked all the dashboards in Tableau that were based on the game/product data and some based on the marketing data. Writing complex SQL queries processing millions of rows was my daily routine. Also I leaded a small team of QA engineers, distributed and prioritized tasks, made on-boarding 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, BigData

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, Field work, 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 team 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, Tableau, Looker, Plotly dash, Spreadsheets
  NoSQL: DynamoDB, MongoDB
  Linux: Bash, system management, SSH, Nix
  Containers: Docker, systemd-nspawn, LXC, Kubernetes, chroot
  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**: *Field work*: 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 at 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 direct analytical calculation procedure for heat exchanger design, avoiding usage 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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