

Alvis Logins

latvian, 32 y.o. male.

Lead Data Scientist • Software Engineer • PhD

alvis.logins@gmail.com • alogins.net • in/alvislogins/ • +7 (993) 201 32 92

About

I'm a research-oriented engineer with a broad scope of expertise and reliable competence. I received Ph.D. in Computer Science in 2020. After graduation, I joined the Laboratory of Mathematical Modelling and Optimization Algorithms at Huawei. Soon I became a research team leader. Currently optimizing WiFi-related algorithms.

I have worked in different size companies and academic laboratories in Physics, Mathematics, and Biology. I have an extensive list of internships in more than six countries. I was teaching Physics, Programming Languages, Databases, and Algorithms to Danish and Russian students. The topics I was involved in are remarkably diverse, yet the applied methods mostly remain within Data Science and Data Management. Such experience provided me with a strong sense of environment, which allows me to effectively manage the workflow under any circumstances.

Experience

Since Jan 2021: Research Team Lead *Huawei Technologies Co., Ltd., Moscow*

Since 2023: Working on WiFi signal strength and channel estimation algorithms.

2022: Implemented a pose estimation algorithm for street-view ITS cameras, based on lane and licence plate detection. The algorithm is part of a camera commissioning tool.

2021-2022: Designed an end-to-end robotic system for pick&place scenario in an optic fiber product line. The tasks include robot calibration, low-level controller tuning, high-level trajectory planning, pose estimation and grasping. Submitted a patent of a novel kinematic calibration method.

Nov 2020 – Jan 2021: Senior Data Scientist *Huawei Technologies Co., Ltd., Moscow*

Improved a digital signal processing algorithm of optic fiber receivers, by compensating non-linear distortions in a transmission line using neural networks.

2016 – 2020: PhD candidate *Aarhus University, Denmark*

Researched discrete optimization and data mining techniques in large graphs, such as social networks and road maps.

Jun – Nov 2016: Junior Data Scientist *Habidatum, Moscow*

Worked on a regression model for the russian real estate market, with an emphasis on data mining and engineering.

2015 – 2016: Junior Researcher *Skolkovo Institute of Science and Technology*

Designed a data structure for spatial indexing with fast join operation. Considered a parallelization problem of a sequential spatial bipartite matching algorithm (CPU/GPU).

2012 – 2014: Junior Researcher *Moscow Institute of Physics and Technology*

Developed and studied a fast molecular simulator for a coarse estimation of alpha and beta protein folds, in dynamics.

2007 – 2016: Full-Stack Web Developer *Freelance*

Implemented more than 20 projects for small companies and educational institutions. Headed a technical team of a fintech startup with over 5k customers for 3 years.

Selected Publications

I. Gukov, A. Logins, *Real-time Multi-Objective Trajectory Optimization*, IEEE International Conference on Robotic Computing (IRC), 2022.

A. Logins, Jiale He, K. Paramonov, *Block-Structured Deep Learning-Based OFDM Channel Equalization*, IEEE Communications Letters, 2021, pp. 321 - 324.

A. Logins, Y. Li, P. Karras, *On the Robustness of Cascade Diffusion under Node Attacks*, in Proceedings of the Web Conference (WWW 2020), 2020, pp. 2711–2717.

A. Logins, P. Karras, C. S. Jensen, *Multicapacity Facility Selection in Networks*, IEEE International Conference on Data Engineering (ICDE 2019), 2019, pp. 794–805.

A. Logins. *Resource Allocation in Networks*, PhD Dissertation, Aarhus University, 2020.

Areas of Interest

- Discrete and Continuous optimization
- Probability theory and Statistics
- Deep Learning and Computer Vision
- Databases, Data mining

Expertise

Topics

- Physical and data link layers of WiFi
- Object Pose Estimation
- Robotics, Serial Manipulators
- Flow optimization in large networks
- Protein folding
- Full-stack Web development

Languages

- Python, C / C++

Early experience:

- Javascript, php, SQL, Lisp, Prolog, Scala, MATLAB, C#, Visual Basic

Tools

- pytorch, ROS, bash, git, CUDA, Wolfram Mathematica, Docker, Kubernetes

Education

PhD, Computer Science, 2020

Aarhus University (AU), Aarhus, Denmark

MSc, Applied Mathematics, 2016

Skolkovo Institute of Science and Technology, Moscow, Russia

Massachusetts Institute of Technology (MIT), Boston, USA (joint programme)

BSc, General & Applied Physics, 2014

Moscow Institute of Physics and Technology, Moscow, Russia

Internships [1– 3 months]

- Huawei Headquarters *Dongguan, China, 2023*
- Singapore Management University *Singapore, 2019*
- University of Macao, *Macau, 2019*
- Aalborg University, *Denmark, 2018*
- University of Ioannina, *Greece, 2015*
- IMSI, *Greece, 2015*
- INRIA, *France, 2013*
- Intel, *Moscow, 2012*