Oleg Vasilev

5 years experience in system software engineering

+7 (705) 458 9203
me@svin.in
me.svin.in
omrigan
omrigan
Telegram: @omrigan

Work Experience

Oct 2022 – Now — **Virtuozzo**, *Senior Software Engineer*, Core Team.
- Working on libvirt & virt-manager - ubiquitously adopted virtualization management tools
- Communicating with upstream open-source communities, have 7 patches in the upstream branch
- Rebased ~600 Virtuozzo's patches on top of upstream, bringing 6 months worth of features to customers

Oct 2021 – Oct 2022 — HUAWEI, *Senior Software Research Engineer*, Network Algorithms Lab.
- Researched QEMU TCG translation architecture, yielding 10 approaches with 5-30% performance impact each
- Presented a proof of concept for ARM virtualization overhead reduction from 20x to 1.5x by implementing an in-house acceleration engine.
- Improved type inference engine for a Lua to Go-like language transpiler

Sep 2019 – Oct 2021 — Yandex, *Software Engineer*, Core Infrastructure Department, Object storage/Network teams.
- Prevented uptime loss for >100 services by implementing firewall validation pipeline in ipvs-based load balancers
- Saved 105 petabytes of data in cold storage by integrating lossless images compression with open source lepton
- Part of an infrastructure overhaul to introduce consistency and scalability to the 1 exabyte storage

Apr – Aug 2019 — intel., *Linux Kernel GPU Intern*, Helsinki.
- Implemented GPU sharing for vkms driver in the upstream linux kernel
- Added new KMS property to Intel, AMD and Nvidia open source drivers
- Patches accepted upstream: 10 to kernel and 11 to IGT

Apr – Nov 2018 — **Digital Contact**, *Backend Engineer*.
High-load distributed system for email marketing. Microservices architecture, Python, Docker, MySQL, RabbitMQ.
- Reduced daily campaigns scheduling from 6 hours to 20 minutes by implementing MILP-solver
- Implemented Directed Acyclic Graph computation framework

Jun – Oct 2017 — Yandex, *Data Engineering Intern*, Machine Intelligence and Research Unit, Dialogue Systems Group.
Improved AI model by implementing GPT-like algorithm, extended the model for large-scale training and accomplished over 150 experiments.

Education

2020 – 2021 — **Yandex School of Data Analysis**.
- External Memory Algorithms
- Combinatorial Optimization
- Advanced Operating Systems
- Theory and Practice of Concurrency

Spring 2019 — **University of Helsinki**, Exchange student.
- Cloud and Edge Computing
- Transactions Management and Query Optimization
- Big Data Frameworks
- Scalable Overlay Networks

2016 – 2020 — **HSE**, *Bachelor in Computer Sciences*.
Higher School of Economics, Applied Mathematics and Informatics
- Parallel and Distributed Computing
- Computer Architecture and Operating Systems
- Computer Networks
- Modern Processors Architectures and Programming

Skills

Languages	Go, C, Rust, Python, C++, x86/ARM asm, CUDA C, bash
Technologies	gdb, strace, linux kernel, libvirt, qemu
Auxiliary	Docker, AWS, SQL, CI/CD pipelines
Math	Algorithms, Graph theory, Formal grammars, Discrete Optimization
Languages	English (full working proficiency), Russian (native)

Projects and Research

2018 – 2019 **Urban Scheduler**, github.com/Omrigan/urban-scheduler.
Location-centric daily scheduler, improving daily urban routine with Integer Programming and MCTS. Rust, Python, React, OpenStreetMap, Docker.

Oct 2018 **Adjutant**, devpost.com/adjutant.
Embeddable JS-library for voice control and feedback.
Winner of Hack.Moscow in three different nominations:
- Best GPU usage by reg.ru
- Best voice application by Cleverbots
- Best project of the hackathon

Dec 2017 – Apr 2018 **Deep Reinforcement Learning Hands-on**, *ISBN: 9781788834247*.
Technical review and editing for the book. The book is authored by Maxim Lapan, published by Packt.

2016 – 2017 **Unified sentence embedding for question answering**, github.com/Omrigan/QAprediction.
The research explores an idea of combining retrieval and generative-based Q&A systems.
- December 2016: Absolute winner with a prototype at data analysis hackathon "GoToHack 2".
- May 2017: Poster at HSE Data Science seminar.

Competitions and Achievements

Jul 2019 **HERE Open Location Hack**, *Prizewinner with Urban Scheduler project*.

Mar 2019 **Google HashCode**, *Top-1 in Finland during qualification round*.
Organized a hub in Helsinki, participated with an international team

Oct 2018 **Hack.Moscow**, *Absolute winner with Adjutant project*.

May 2016 **NTI contest**, *Prizewinner*.
Prizewinner on National Technological Initiative contest at Data Analysis department

Mar 2016 **Moscow Olympiad on informatics**, *Gold medal*.

Mar 2016 **X Open Olympiad on informatics**, *Bronze medal*.

Dec 2015 **National Team Contest on Programming**, *III grade diploma*.

Teaching experience

2017 – Now **GoTo**, *Deputy Director on Education*.
- Designed, taught and supervised multiple courses (Algorithms&Applications, Systems Programming, ...)
- Providing methodical support on other courses
- 100+ students taught directly, 1000+ by other teachers under supervision

Jan – May 2017 **School 935**, *Lecturer*.
Weekly informatics lessons. Helped a class of 20 make their first steps in IT.

2016 – 2018 **Yandex School of Data Analysis and CS HSE**, *Teaching assistant*.
Reinforcement Learning and Deep Learning semester-sized courses were developed with a huge practicality focus. Conducted workshops; designed and checked assignment; did technical support for multiple groups, 500+ master students in total
Online versions have 6.5k stars on GitHub in total: github.com/yandexdataschool/Practical_RL and github.com/yandexdataschool/Practical_DL