

Ivan Egorov

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Summary

Software Engineer with 15 years of experience, I have contributed to large scale services and data processing pipelines, OS drivers and system libraries, compilers, debuggers and desktop applications.

Experience

Daedalean AI

ZÜRICH, SWITZERLAND

Software Engineer

Aug '22 – present

Daedalean is building autonomous piloting software systems for civil aircraft of today and advanced aerial mobility of tomorrow

- Designed and developed OS drivers and image processing applications for the PilotEye visual traffic detection system.
- Implemented a prototype of a visual obstacle detection system.

Facebook

ZÜRICH, SWITZERLAND

Software Engineer, Oculus

Nov '19 – Jun '22

- Facilitated migration of Oculus from Linux/Android to a novel non-POSIX OS developed inhouse: implemented a pthread library, integrated BUCK build system with the OS toolchain to provide unit testing facilities, curated the migration of first- and third-party libraries to the new OS.
- Refactored the internals an Oculus C++ logging library to reduce its binary footprint by an order of magnitude.
- Designed an IDL language and the accompanying C++ codegen for an inhouse IPC library.

Google

ZÜRICH, SWITZERLAND

Software Engineer

Jan '10 – Oct '19

Contributed to Chrome, Maps, Assistant, and YouTube, in SWE and SRE roles.

- Optimized desktop-focused the Google Maps Transit (“get me from Zurich to Bern by public transport”) backends to early smartphone clients with their lower bandwidth, higher latency, smaller screens. Contributed to API and algorithmic changes, resources estimates and provisioning, incidents investigations and stability fixes that would make the routing useful on desktop and mobile devices. Seamlessly replaced a redundant backend with an endpoint in a more generic service, coordinated the migration of downstream systems to the new endpoints. Implemented realtime GTFS data ingestion into the routing engine.
- Optimized the latency and resource consumption of a daily logs processing pipeline evaluating a Google Maps quality metric.
- Introduced query stream sharding in a YouTube personalization cache service, increasing the cache hit rate and cache memory utilization.

EMC

SAINT-PETERSBURG, RUSSIA

Software Engineer

Jan '09 – Dec '09

I worked in a team building a performance analysis tool for large data storage systems shortly after the tool has been migrated from C++ to C#.

- Introduced systematic unit testing, lead migration to SVN, contributed fixes and improvements to the analysis tool.

Intel

SAINT-PETERSBURG, RUSSIA

Software Engineer, Intern

2007 – 2008

I worked in a Compiler Team, supporting the development of a novel data processing chip.

- Developed a debugger for the chip's VLIW programs, supporting multiple backends: software emulator, FPGA simulator, and the hardware.
 - Conducted research on a more compact instruction format for the chip.
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Education

Saint-Petersburg State University
MSc in Software Engineering

SAINT-PETERSBURG, RUSSIA
2004 – 2009

Skills

Technical expertise: I have practical experience with C++, C, Go, Rust, Python, and navigate freely between the layers of abstraction from CPU-specific optimizations to large scale pipeline processing.

Natural languages: Russian (*mother tongue*), English (*full professional proficiency*), German (*elementary proficiency*).