

Ilia Kaliuzhnyi

Senior C++ Engineer | Distributed Systems | Concurrency & Performance

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SUMMARY

Senior Software Engineer with 15+ years of C/C++ experience across Amazon AWS (Redshift), distributed backends, and AAA game development. Strong expertise in multithreading, concurrency control, networking, and performance optimization. Advanced Linux profiling/debugging skills (perf, gdb, valgrind, heaptrack). Proven ability to deliver complex systems in high-scale production environments.

CORE SKILLS

- C/C++, multithreading, concurrency, distributed systems, networking, storage systems, performance optimization, debugging
- gRPC, Protobuf, Thrift, RabbitMQ, Boost (asio/threads), Ragel, JNI
- PostgreSQL, Redshift, MySQL, ClickHouse
- Linux, Windows · CMake, Makefiles · Scrum, TDD, unit testing

EXPERIENCE

Amazon AWS — Berlin, Germany

Software Development Engineer II (SDE II / L5) · Feb 2022 – Jul 2025

Amazon Redshift / AQUA · Tech: C++, PostgreSQL/Redshift internals, gRPC

- Led migration from Thrift to gRPC in Redshift AQUA transport layer, improving maintainability and service interoperability.
- Implemented core storage/concurrency modifications enabling concurrent COPY into the same table (multiple sessions writing simultaneously).
- Result: adoption by major external/internal clients incl. JPMC (largest customer).

Funcom — Oslo, Norway

Senior Software Engineer · Feb 2020 – Dec 2021

Dune: Awakening · Tech: C++, Unreal Engine, RabbitMQ

- Delivered core functionality enabling UE5 server sharding, allowing scalable player concurrency ("unlimited connected players" architecture).
- Integrated backend messaging and UE runtime support for large-scale online systems.
- Credits: Dune: Awakening

Wargaming — St. Petersburg, Russia

Senior Software Engineer · Sep 2017 – Jan 2020

Steel Hunters · Tech: C++, Java, UE4, gRPC, RabbitMQ

- Designed and developed multiplayer server-side/backend systems.
- Built an Unreal Engine gRPC integration plugin for production service communication.
- Team leadership: led 2 engineers (planning, reviews, delivery).

Netwrix — St. Petersburg, Russia

Senior Software Engineer · Dec 2016 – Sep 2017

Tech: C++

- Developed Microsoft DFS audit subsystem for Netwrix Auditor suite.

Adriver.ru — St. Petersburg, Russia

Senior Software Engineer · Jun 2014 – Dec 2016

Tech: C/C++, Boost

- Built low-latency high-load RTB platform components; worked on proprietary in-memory DB systems.

GridGain — St. Petersburg, Russia

Senior Software Engineer · Jan 2014 – Apr 2014

Tech: C++

- Optimized and improved GridGain C++ client libraries.

Sperasoft — St. Petersburg, Russia

Senior / Lead Software Developer · Jul 2007 – Jan 2014

Credits: FIFA Street, FIFA 13, FIFA 14

- Delivered major gameplay features for AAA titles across console platforms.

EDUCATION

M.Sc. Applied Mathematics — Saint-Petersburg State University