

NIKOLAI VLADIMIROV

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EDUCATION

Constructor University

Bachelor of Computer Science

Bremen, Germany

Jan 2023 - Jul 2024

HSE university

Bachelor of Applied Mathematics and Computer Science

St.Petersburg, Russia

Sep 2021 - Dec 2022

Relevant Courses: *Advanced C++, Rust, Golang course, Python, Algorithms and Data Structures, Computer Architecture and Operating Systems, Functional Programming, Calculus, Linear Algebra, Discrete Mathematics.*

SKILLS

Programming Languages: C++/C, Java, Kotlin, x86asm, Python, Go, Rust, SQL, Haskell

Frameworks: Boost, Google Benchmark, Gradle API, libdeflate, Godot Engine, Crow

Tools: Git, GDB, Perf, Docker, Gradle, Doctest

EXPERIENCE

[Google Summer of Code, Eclipse Foundation](#) | *Java, Kotlin, Gradle API*

Jun 2023 - Aug 2023

Eclipse Gradle KTS editing

Remote

- Emerged as one of 967 open-source contributors, selected from a pool of 43,765 applicants.
- Accomplished support of Gradle Kotlin Scripts to Eclipse IDE by embedding a [new plugin for the official Gradle integration for Eclipse](#).
- Enhanced the reliability and accuracy of diagnostics for Gradle Kotlin Scripts by completely redesigning the existed kotlin language server and creating a new compilation system.
- Implemented a [plugin for Eclipse](#) to add support for essential Language Server Protocol features in gradle.properties files by developing a own language server.

[Spectral:Technologies](#) | *C++20, Boost, Perf, CMake, Python, Google Benchmark*

Oct 2022 - Dec 2022

Research work: implementation of crypto market predictor

Remote

- Increased time efficiency by 60% with the help of the Perf code profiling tool by implemented various optimizations related to reduction of CPU workload.
- Developed an HTTP client that efficiently retrieves snapshots of order books by employing a streamlined implementation approach.
- Used the shared-memory Boost API to provide the imbalance metric and efficiently fetch test data.
- Designed a custom JSON Parser to accelerate the parsing of order book updates delivered through WebSocket connections, resulting in 2x efficiency boost compared to the widely used [nlohman/json parser](#).

HSE university, C++ Teaching Assistant | *C++17, Boost.Asio, Boost.DLL, C*

Sep 2022 - Jan 2023

Freshman year Teaching Assistant

St.Petersburg, Russia

- Delivered seminars every week throughout the semi-annual C++ course for group of freshmen on topics such as Basic Syntax and STL, Linking and Loading, Value Categories, Templates and more.
- Conducted bi-weekly code reviews of assignments, addressing common mistakes during seminars.

PROJECTS

[PNG-decoder](#) | *C++17, Boost, libdeflate*

Apr 2023

- Built a PNG decoder utilizing external libraries for deflate and CRC calculations, based on the PNG specification.
- Effectively handled a wide array of image modes, encompassing bit depths up to 8.

[InVasion - team project](#) | *C++17, ProtoBuf, Boost.Asio, SQLite, Godot Engine, CMake, Crow*

May 2022

Online 2.5D multiplayer shooter

- Created an HTTP server integrated with a database, responsible for gathering game statistics and managing user authorization. Established network communication over the TCP protocol using the Boost library.
- Set up thread-safe queues for receiving/sending messages between clients and the server.
- Implemented Rest API for client interaction with the database using Crow library.

OTHER ACHIEVEMENTS

- Grant from JetBrains to continue studying in Germany.

Jan 2023