

RAED ROMANOV

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EXPERIENCE

Senior Software Engineer

📅 September 2022 - Present

Yandex

Project: Apphost — API gateway and communication layer for highload services. My key contributions were:

- Implemented various synchronization and networking primitives for C++20 coroutine support library
- Migrated the entire project from fibers to C++20 coroutines, reducing request latency by 10ms and increasing throughput by 20%
- Managed development of the compatibility layer in Apphost v2 and migrated internal users

Software Engineer

📅 September 2020 - August 2021

1C

Project: [1C:Enterprise Development Tools](#)

In EDT team we worked on a modern IDE for 1C applications. My contributions included:

- Optimized metadata management for batch source file changes, like switching VCS branches
- Halved the delay between starting a branch checkout and being able to resume work
- Developed multi-version and overlay support for [the embedded DBMS](#) for metadata management

Teacher

📅 September - December 2020

Moscow Institute of Physics and Technology, [CIS Department](#)

Subject: [Metaprogramming in C++](#)

Taught 4th-year students advanced C++ tricks and features of the modern C++ standards.

Software Engineer

📅 May - July 2019

offscale.io

Project: [liboffkv](#)

Designed and implemented, with two colleagues, a C++ library providing a unified interface for three distributed key-value storages: ZooKeeper, etcd and Consul KV.

Intern Software Engineer

📅 Summer 2018

JetBrains

Project: Distributed file system

As a member of the [Delightex](#) team, developed a client-server file system deployable across multiple servers to provide [CoSpaces Edu](#) users with consistent data access.

PUBLICATIONS

Raed Romanov and Nikita Koval. 2023. [The State-of-the-Art LCRQ Concurrent Queue Algorithm Does NOT Require CAS2](#). In Proceedings of the 28th ACM SIGPLAN Annual Symposium on Principles and Practice of Parallel Programming (PPoPP '23). Association for Computing Machinery, New York, NY, USA, 14–26.

EDUCATION

Programming and Data Analysis, MSc

📅 2021-2023

Higher School of Economics — Saint-Petersburg

- Computer Science: Rust, parallel algorithms, distributed algorithms, coding theory, cryptography, general-purpose computing on GPU

Thesis: Portable and Efficient Concurrent Lock-Free Queues

Applied Mathematics and Physics, BSc

Moscow Institute of Physics and Technology

📅 2016-2020

Department of Applied Mathematics and Informatics

- Computer Science: C++, Python, algorithms and data structures, concurrent programming, distributed systems, OpenGL
- Mathematics: calculus, linear algebra, probability and statistics, discrete mathematics

Thesis: Real-time Collaborative Editing of Neural Networks

Average grade: 8.8/10

AWARDS

Telegram VoIP Contest Round 1

📅 November 2019

3rd place

Created a C++ application for testing and rating the quality of VoIP calls. The key features included:

- Simulation of a VoIP call between two users over an unreliable network and recording the outgoing sound
- Estimation of speech intelligibility in the outgoing sound

Junction Hackathon

📅 November 2019

Challenge winner

Collaborated on the development of a voice diary with emotion recognition for children. Implemented the Android application.

BE5 Hackdays Hackathon

📅 February 2019

Track winner

Our team created a prototype of facade dirtiness estimation system. I developed the IoT part using Arduino.

All-Russian School Programming Contest

📅 April 2016

Awardee

SKILLS

- **Programming languages:** C++, Java, Kotlin, Rust, Python
- **Areas of expertise:** algorithms and data structures, concurrent programming, distributed systems, system programming
- **Tools & technologies:** SQL, Git, Docker, AI tools