



# Pavel Kirin

C++ SOFTWARE ENGINEER

Kyrgyzstan/Ready to relocate

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## Summary

I am a C++ developer, and I'm open to job offers with a relocation.

I'm passionate about software programming and building efficient solutions and architecture. I'm interested in algorithms and optimization methods.

My advantages are craving for fundamental knowledge; effective project management and problem-solving; flexibility and adaptability for new problems; and easy communication for teamwork.

## Experience

### TrueConf

Moscow, Russia / Remote

C++ BACKEND DEVELOPER

Apr. 2022 - Present

- Worked on the "TrueConf Server" and "TrueConf Enterprise" products.
- Developed, maintained, and improved inner chat features, including chat's database.
- Implemented unit and integration tests using the GoogleTest framework.
- Developed and maintained Python scripts for the server's stress testing.
- **Notable technologies used:** [C++17], [Boost], [Boost.ASIO], [Python], [SQLite], [PostgreSQL], [GoogleTest].

### SoftBuilding

Saint Petersburg, Russia

C++ DEVELOPER

Sep. 2021 - Jan. 2022

- Developed and maintained software for internal use within the company.
- Finalized the legacy C++ parsers with libcurl library.
- Developed the advanced Web Scraper written on TS, working on a headless version of Chrome browser.
- **Notable technologies used:** [C++20], [Node.JS], [TS], [.NET], [MS SQL].

## Skills

<b>Programming</b>	[C++20], [OOP], [Boost], [Boost.ASIO], [SQL], [Multithreading], [GoogleTest]
<b>Familiar with</b>	[Python]
<b>Software &amp; Tools</b>	[Git], [Jupyter Notebook], [Jira Software], [OpenProject], [Wireshark], [Postman]
<b>Soft Skills</b>	Communication, Adaptability, Team Work, Problem-solving, Flexibility, Project management
<b>Languages</b>	Russian (native), English (B2)

## Publications

### Deletion in Red-Black tree

[Link: Habr/Deletion in RB-tree](#)

UNDERSTANDING HOW DOES THE DELETION IN RED-BLACK TREE WORKS.

Data structures, Algorithms

## Education

### École 42 / School 21

[Link: 42/Alumni certificate](#)

ALUMNI

Aug. 2020 - Jun. 2023

- Programmer courses with peer-to-peer system between students. There I learned much about the culture of programming, and trained on complex projects.
- Improved skills: [C/C++], [STL], [Object-oriented programming], [POSIX API], [Multithreaded programming], [IPC], [Algorithms and optimizations], [Linux], [Git], [Documentation]

### Moscow Aviation institute

Moscow, Russia

BACHELOR'S DEGREE

Sep. 2019 - Jan. 2022

## Selected projects

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For more info about the next projects, please visit the GitHub pages by the links below.

### webserver

OWN IMPLEMENTATION OF WEBSERVER (LIKE NGINX) WITH CUSTOM CONFIGS

- Solving multiplexing problem with low-level select function.
- HTTP/1.1 requests processing.
- Custom configurations of multiple servers.

*Link: [MosheGroot/webserver21](#)*

*C++98, Sockets, Multiplexing, OOP*

### ft\_containers

REWRITING OF FOUR STL CONTAINERS + RED-BLACK TREE

- Own implementations of vector, stack, map, and set.
- Own implementation of Red-Black tree for map and set containers

*Link: [MosheGroot/ft\\_containers](#)*

*C++98, STL, SFINAE, Data structures*

### minishell

OWN IMPLEMENTATION OF THE SHELL WITH SYNTAX ANALYSIS, PARSING, AND IPC

- Readline library for interactive I/O.
- Syntax analyzer for input values.
- Supporting pipes, redirections, and heredoc

*Link: [LinearBasis/minishell](#)*

*C, POSIX API, IPC*

### miniRT

MINI RAY-TRACING PROJECT

- Custom scene file format.
- Supported: sphere, plane, square, triangle, and cylinder.
- See **screenshots** on the project page!

*Link: [MosheGroot/miniRT](#)*

*C, Linear algebra, Multithreading*

## Hobbies

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- Guitar
- Photography
- Writing