



# Pavel Kirin

C++ DEVELOPER · DATA SCIENTIST

Moscow, Russia · Remote / Ready to relocate

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## Summary

I am a C++ developer, and open for remote job offers or with a relocation.

I'm passionate about software programming, building efficient solutions and architectures. I'm interested in algorithms, methods of optimization, mathematics, and also in Data Science.

My personal advantages: craving for fundamental knowledge, effective project management and problem-solving, flexibility and adaptability for new problems, easy communication for team work.

## Experience

### TrueConf

C++ DEVELOPER

Moscow, Russia

Apr. 2022 - Present

- Develop and maintain server part of the TrueConf software.
- Improve and maintain inner chat features.
- Notable technologies used: [C++17], [FASTBuild], [GoogleTest].

### SoftBuilding

C++ DEVELOPER

Saint Petersburg, Russia

Sep. 2021 - Jan. 2022

- Develop and maintain software for internal use within the company.
- Finalize the pure C++ parsers with libcurl library for requests with multithreading for every target website.
- Develop the advanced Web Scraper written on TS, working on headless version of Chrome browser.
- Implement parsers and sub scrapers for new targeted websites.
- Notable technologies used: [C++20], [Node.JS], [TS], [.NET], [MS SQL].

### Freelance

FREELANCE

Moscow, Russia

Nov. 2020 - Sep. 2021

Various C++ projects to order.

## Skills

<b>Programming</b>	[C/C++20], [OOP], [Multithreaded programming], [POSIX API], [SQL (basics)]
<b>Familiar with</b>	[Python], [TS], [.NET]
<b>Software &amp; Tools</b>	[Git], [Jupyter Notebook], [Jira Software], [Postman], [Fiddler]
<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

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

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

Data structures, Algorithms

## Selected projects

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

### webserver

OWN IMPLEMENTATION OF WEBSERVER (LIKE NGINX) WITH CUSTOM CONFIGS

[Link: PP189B/webserver21](#)

C++98, Sockets, Multiplexing, OOP

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

## 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: PP189B/ft\\_containers](#)  
C++98, STL, SFINAE, Data structures

## minishell

OWN IMPLEMENTATION OF 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 at the project page!

[Link: PP189B/miniRT](#)  
C, Linear algebra, Multithreading

## Education

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### École 42 / School 21

STUDENT

*Paris, France / Moscow, Russia*

*Aug. 2020 - Present*

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

### Moscow Aviation institute

BACHELOR'S DEGREE

*Moscow, Russia*

*Sep. 2019 - Jan. 2022*

## Hobbies

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- Guitar
- Photography
- Painting
- Writing