



# Mikhail Pogretskiy

Rust developer

## About me

I'm a Rust engineer experienced in Rust, WebAssembly, UNIX and blockchain. My C/C++ embedded background provided me with deep understanding of how software works on the lowest level and how it interacts with hardware. During software development my main priority is it's reliability and security. I put in extra effort to make sure that it adheres to best practices and applicable open standards.

I have experience in coordinating teamwork on a project and prioritizing key features and tasks. I proactively engage in discussions of what project or feature aims to achieve and what is required to implement it. This allows me to identify potential difficult points early on, provide swift feedback and set realistic goals or come up with a good compromise if resources are limited.

And of course I always remain open to learning from other people or from my own experiences. I feel like this is a must for being a good developer in a rapidly-changing software development world.

## Employment history

### Backend developer (Rust) at Balthazar Labs

June 2024 - Present

Remote

Rust Python sqlx

- Developed and maintained a system to track the process and results of scientific experiments, including a backend service and a Python code runner.
- Implemented persistent state in the runner to preserve information across multiple code executions.
- Added tracking of relevant experiment information in the runner, such as script stdio, files, plots and graphs, errors, etc.
- Implemented cross-platform functionality to stop script run remotely, in a controlled manner.

### Blockchain developer (Rust) and founding engineer at TONOMUS, NEOM

October 2023 - March 2024

Remote

Rust Substrate DID

- Developed and maintained a decentralized identity system based on the Substrate framework.
- Added support for flexible Substrate runtime configurations for development, staging and production environments.
- Researched try-runtime feature of Substrate, implemented it in the project and gave an internal presentation, summarizing its features and use cases to the dev team.
- Conducted research for a startup at an extremely early stage.
- Led efforts to organize research data. Analyzed it, proposed new ideas shaping early versions of the product.
- Designed early product prototypes in Figma to collect user feedback.

## Skills

- |                 |           |
|-----------------|-----------|
| Rust            | Git       |
| WebAssembly     | GitLab CI |
| Substrate       | Tokio     |
| Smart Contracts | x86 ASM   |
| Blockchain      | Elm       |
| Linux           | Python    |
| UNIX            | Lua       |
| API design      | C         |

## Contacts

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- Mobile**  
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## Location

Tbilisi, Georgia

## Website

anfid.github.io

## Links

Anfid

## Languages

- |         |        |
|---------|--------|
| English | Fluent |
| Russian | Native |
| Spanish | Basic  |

## Smart contract developer (Rust) at Bictory

January 2022 - October 2022

Remote

**Rust** **Smart Contracts** **WebAssembly** **Concordium** **API design**

Updated NFT project to adhere to Concordium blockchain interoperability standard CIS-1.

Took full responsibility for designing and implementing name service smart contract for Concordium ecosystem and provided a flexible solution within strict time schedule despite unclear and fluctuating requirements. During my work on the name service I was able to provide stable documentation of future API and binary serialization format extremely early to allow the start of integration process and reduce overall project development time.

All the work had to be done in a rapidly changing environment, some work-in-progress solutions had to be reworked swiftly due to blockchain updates.

Aggressively optimized WebAssembly binaries for size to provide extensive functionality despite strict blockchain limitations.

## Blockchain developer (Rust) at Gear

August 2021 - December 2021

Moscow, Russia

**Rust** **WebAssembly** **Substrate** **API design**

Provided library interface for smart contract development with safe and user-friendly abstractions over low-level functions exposed by smart contract platform.

Greatly extended the functionality of smart contract test library and streamlined it's API.

Implemented unit tests for existing functionality.

## Blockchain developer (Rust) at XDSoft

September 2019 - March 2021

Novosibirsk, Russia

**Rust** **Tokio** **GitLab CI** **Exonum**

Implemented the intellectual property tracking system on top of the Exonum blockchain node.

Updated consensus algorithm to improve node connectivity.

Had to take over leading the project development urgently, was able to adapt to new responsibilities quickly and made sure that good quality product was delivered in time.

Integrated cryptography library in accordance with certification requirements, provided necessary documentation for certification process.

Set up and optimized GitLab CI test and build process for Rust project.

## Embedded developer (C/C++) at MERA

March 2018 - September 2019

Nizhniy Novgorod, Russia

**C/C++** **Embedded** **Networking** **Buildroot** **RTOS**

Developed and maintained fire alarm and security systems on embedded devices running Linux and TreadX RTOS.

Improved device network connection stability.

Migrated legacy firmware to a device running RTOS.

Researched networking standards and protocols to work on network switch firmware.