

Vladislav Melnik

Temporal location: Brno, Czech Republic. Location: Lviv, Ukraine.

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Core skills

- Programming: Rust, C++, C, Swift;
- Networking techniques: low level (io_uring, epoll, kqueue), high level (LibP2P, QUIC).
- Networking algorithms: handshake (TLS, Noise), peer routing (Chord, Kademlia).
- Linux Low-level programming (kernel or driver development, use eBPF in Rust);
- Understand principles of accelerated 3D graphics (OpenGL, Vulkan);
- Cryptography: symmetric, asymmetric, cryptographic primitives: Galois field, elliptic curve, zk-SNARK;
- Understand smartcontract and blockchain cryptography;
- Work with Docker and microservices;
- iOS: Cocoa API (Core Foundation, Core Data, etc.), Core Animation, AVFoundation, AFNetworking, OpenGL ES, Metal;

Research interests

- Mathematics: category theory, algebra, number theory;
- Post-quantum cryptography, lattice.
- Theoretical physics: group theory, modern geometry;

Education

- Kirovograd State Pedagogical University 2008 – 2012, Bachelor in mathematics;
- Kirovograd State Pedagogical University 2012 – 2013, Masters degree in mathematics;
- English language skill is lower intermediate, able to read and write technical documentation, speak with consumer in English.

Experience

- iOS developer (Jan 2014 – Jun 2015) in M.I.F.Projects outsource company. Contact with consumer, implementing iOS application.
- Game developer (Jun 2015 – Nov 2016) in Gameloft. Implementing new functional (mostly in C++), fixing bugs (C++ and objective C), writing documentation, investigation emergency live issues, writing scripts in Python.
- iOS developer (Nov 2016 - Jun 2018) in GlobalLogic. Contact with consumer, implementing iOS application, testing, writing docs.
- Rust backend developer (Jun 2018 - Jan 2020, remote) in Bitfury Peach. Implementing the lightning node in Rust. Implementing [the wallet backend](#) in Go.
- Senior Rust developer (Jul 2020 - Jun 2024) in Viable Systems. Implement Tezos node in Rust. Implement Mina node in Rust. Create a debugging and testing toolkit.
- Software Engineer (Jul 2024 - present) in Mina Foundation. Implement Mina node in Rust.

Opensource

- [Noise handshake](#);
- [Tools for using eBPF in Rust](#);
- [Post quantum key encapsulation algorithm](#);
- [Lightning node \(far from complete\)](#);
- [Wrapper for secp256k1 library to build for Wasm32 target](#);

Last updated: October 2024