

NIKOLAI SHELEKHOV SENIOR RUST ENGINEER

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I write Rust where it matters most — kernel modules, cryptographic pipelines, financial protocols. From Linux DCO drivers to on-chain AMMs.

Full stack of hard problems — kernel-space networking with C interop, high-load backend services in Axum and Rocket, Solana DeFi, ZK proof systems. 5 years of production Rust, from no_std to REST APIs.

I don't reach for abstractions until I understand what's underneath them. That's why my systems are fast, my backends are boring (in a good way), and my smart contracts don't get drained.

WORK EXPERIENCE (most recent roles)

full experience is [here](#)

Provably

Jan 2026 - Present

Rust Core Backend Engineer

- Refactored Rust/Axum backend architecture by decomposing controllers into service layers with unified error handling and authorization.
- Built comprehensive test suite for core API modules, uncovering and fixing critical authorization bugs.
- Designed and integrated new middleware system for zero-knowledge proof verification pipeline across customer data sources.

Vpnable Limited

Jul 2024 - Jan 2026

Rust Systems Engineer

- Architected Rust-based per-peer workqueue system, eliminating shared queue bottlenecks and improving throughput by 13.4% for millions of users.
- Implemented kernel-space anti-censorship obfuscation using adaptive DNS pattern detection, achieving <0.1% overhead while maintaining compatibility with existing clients.
- Re-architected encryption, decryption, and transmission pipeline using Rust concurrency primitives with C interop for improved scalability and stability.
- Built per-user bandwidth throttling from scratch using eBPF/Rust — kernel-space token bucket rate limiting with DCO-aware TC hooks and full management CLI.

Nyoka

Oct 2024 - Sep 2025

Rust/Solana Blockchain Engineer

- Developed a comprehensive token-based voting system from scratch, enabling platform governance and user engagement.
- Architected smart contract infrastructure with program-derived addresses (PDAs) for secure state management.
- Created comprehensive unit tests to validate core functionality and security constraints.

NXLog

Dec 2022 - Jul 2024

Rust Core Backend Engineer

- Developed four key components of the platform using Rust for high performance and reliability.
- Used Rocket and Axum web frameworks for building scalable web applications.
- Leveraged extensive experience with Salesforce to integrate CRM functionalities, streamline data flow, and enhance user management systems.

TECH SKILLS

Programming Languages:

Rust • C • x86/ARM ASM

Core Competencies:

Async Programming • Concurrency & Multithreading • Memory Management • Performance Optimization • Benchmarking • Low-level Programming • Linux Kernel • no_std Programming • eBPF • Rust/C FFI • Distributed Systems • Algorithms & Data Structures • ZKP

Software Architecture: Prototyping software architecture using C4 diagrams • SOLID Design Principles • Software Design Patterns • Event-Driven Architecture • Microservices Architecture • Plugin Architecture • Domain-Driven Design (DDD)

Blockchain:

Polkadot • Solana • Substrate • Anchor • Cryptography • Smart Contracts • Blockchain Infrastructure • DeFi

Containerization:

Docker • Podman • Devpod

Additional Skills:

Version Control (Git, GitHub, GitLab) • Continuous Integration/Continuous Deployment (CI/CD) with GitLab and GitHub Actions • Database Management (SQL, PostgreSQL, SQLX, Diesel ORM) • Cloud Services (Amazon Web Services, AWS, Google Cloud Platform, GCP, DigitalOcean) • Azure • CRM (Salesforce, Customer Relationship Management) • Web Services API (Actix-web, Axum, Rocket) • Virtual Private Network (VPN) Development (SSL VPN, IP VPN, IPSec) • Networking and Network Security • Information Security and Security Management • API Management and Development • Shell Scripting • Database Development • Cloud Computing • System Performance Optimization • Back-End Development • REST API • Algorithmic Trading • Linux • Linux Server • Wasm • Technical Documentation • Unit Testing • Integration Testing • Code Refactoring • Agile Environment • Automation • Embedded Systems • Testing Practices • Network Protocols • Architectural Design Patterns • Continuous Integration • Open Source Blockchain • Peer Networking • Security Technologies • Test-Driven Development

LANGUAGES

English • Russian