Denis Glotov

Senior Software Engineer · Riga, Latvia
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Senior software engineer with a mathematics background and 25 years of experience building distributed, performance-critical systems in Rust, C++, Go, and Python. Recent work focuses on zkVM proving, Solana/EVM infrastructure, validator nodes, and applied cryptography.

Skills

Rust, C/C++, Go, Python, Solidity, Java, JavaScript/Node.js, Bash, Assembly

Algorithms, zkVM, SP1, Solana, EVM, Cryptography, Zero-Knowledge Proofs, Bitcoin, Web3

Experience

Repyh labs, remote **Sep 2025 - Jul 2026**
Software Engineer

- Developed core backend components for the Delta Network validator node, including SP1 zkVM proof generation and verification for state transitions, Merkle/JMT storage abstractions, cryptographic schemas, and stress-testing workflows.
- Built a remote SP1 proving pipeline with CUDA-backed proof generation and gRPC-based coordination, and benchmarked SP1 against Zisk to evaluate zkVM proving performance.

Skills: Async Rust, BLS, CUDA, gRPC, libp2p, RocksDB, zkVM.

Neon Labs, remote **Oct 2024 - Jul 2025**
Principal Rust Engineer

- Migrated Neon EVM Proxy and Solana Indexer from Python to Rust, optimized CPU performance through profiling, and validated functionality using OpenZeppelin, Uniswap, Aave, and Curve open-source test suites.
- Prototyped zkVMs (RISC Zero, Succinct SP1) with on-chain verifiable proofs using Groth16 and PLONK schemas.

Skills: Solana, Rust, Python, PostgreSQL, zkVM.

Blowfish, remote **Aug 2023 - Aug 2024**
Software engineer

- Engineered the core of a Solana transaction simulator, extended a Solana node fork to enhance simulation compatibility, and built a robust integration testing environment.
- Investigated malicious Solana programs, developed proof-of-concept exploits, and evaluated behavioral hypotheses for security analysis.

Skills: Solana, Anchor, Rust, TypeScript, Grafana.

EYWA Cross-chain Protocol, remote **Sep 2021 - Jan 2023**
Technical Lead

- Designed and implemented an oracle daemon to monitor multiple blockchains, sign relevant events, achieve peer consensus, and persist data in block format.
- Developed smart contracts for BLS signature verification and Merkle tree authentication; tested, gas-optimized, documented, and successfully passed security audits.

Skills: BLS threshold signatures, Merkle tree, Bloom filter, Byzantine, Go, Solidity, Prometheus, Grafana, Echidna.

Accenture, Riga, Latvia **Nov 2015 - Mar 2021**
Software engineer

- Built blockchain proof-of-concepts and pilots, including Solidity/Go smart contracts, backend architecture, security review, and stress-testing tools for multi-node P2P environments.
- Modernized legacy IBM Mainframe systems by converting assembler to C, building z/Architecture debugging tools, emulating z/OS APIs on Linux, and using LLVM KLEE for validation.

Skills: Assembly, C++, Go, Python, Solidity, Bash, Linux, LLVM KLEE.

Mail.ru group Ok.ru social network, Moscow, Russia **Sep 2013 - Oct 2015**
Lead software engineer

- Built promotional-project infrastructure and backend services for a high-traffic Java system serving 45M+ daily users.
- Integrated Voldemort/Cassandra stores, REST APIs, and Bash/Python automation for development workflows and deployments.

Skills: Java, Python, Cassandra, Voldemort, Bash.

Google Inc., Moscow, Russia **Mar 2006 - Jul 2013**
Software engineer

- Contributed 300+ commits to Chrome and Chrome OS, including encrypted user-data cleanup, AddressSanitizer buildbots, boot-time optimization, UI features, and gMock-based tests.
- Built crash diagnostics automation for Google Toolbar by analyzing, converting, and uploading Microsoft Minidumps to Google Breakpad, and monitored production services on Borg.
- Designed and implemented the Google Suggest transliteration system, using MapReduce language statistics to rank real-time suggestions across Russian, Greek, Bulgarian, and Arabic; granted as US Patent 9009021.
- Implemented Google Toolbar platform and product features, including Windows 7/x64 compatibility, low-level stack-walking fixes, COM-based geolocation emulation, and instant metric conversion.

Skills: C++ (GCC, Clang, C++11, Address/Thread Sanitizers), Algorithms, MapReduce, gTest, Python, Linux.

RF Micro Devices Inc., WLAN department, Moscow, Russia **Aug 2000 - Aug 2005**
Software engineer

- Developed, debugged, profiled, and WHQL-certified a complete Windows NT WiFi driver stack, including NDIS Miniport, WDM filter, and NDIS protocol drivers.
- Contributed to real-time MAC firmware for an ARM-based 802.11a/b/g PCIe wireless card, focusing on low-level performance, timing, and protocol correctness.

Skills: Assembly, C/C++ (MSVC), Windows DDK, Compuware DriverStudio, SoftIce, Windbg, Multithreading.

Patent

Automatic transliteration of a record in a first language to a word in a second language.
US Patent 9009021, granted Apr 2015.

Education

Moscow State University, Russia, 2003.
Master of Science in Mathematics, Department of Mechanics and Mathematics.