Nikolai Golub
Senior Backend / Protocol Engineer

nikolay.v.golub@gmail.com | +31 616 69 42 03 | GitHub: @citizen-stig | http://golub.pro
Amsterdam, Netherlands

Profile

Senior software engineer with 8+ years in backend systems and 5+ years in Rust. Built high-throughput distributed infrastructure - storage backends, data availability layers, execution engines - and production observability from scratch.

Experience

Senior Protocol Engineer, Sovereign Labs - Apr 2023-Present

Amsterdam, Netherlands; Remote - ~8 engineers

- Designed and built storage sub-system integrating new storage backend across full-node, prover and verifier - improved production throughput to 5K TPS under real customer load.
- Designed chain re-org handling - fork selection, state rewind, finalization - enabling support for non-instant-finality Data Availability layers.
- Owned Celestia data availability integration end-to-end - data publishing and correctness verification under ZK constraints, where bugs are silent and irreversible.
- Built observability infrastructure from scratch (Grafana, InfluxDB, Prometheus) - process and host dashboards, OpenTelemetry traces, logging and alerts, enabling the team to meet customer SLAs.

Protocol Engineer → Senior Protocol Engineer, ConsenSys - Oct 2021-Dec 2022

Amsterdam, Netherlands; Remote - ~8 engineers (2 sub-teams of 4). Promoted in 8 months.

- Built Rust execution subsystem for Ethereum rollup (pre-Linea) - generated ZK witnesses, integrated with Go prover and Solidity verifier. Took from proof of concept to production on PostgreSQL, Kafka, Kubernetes.
- Improved execution throughput to 2K TPS via custom Merkle tree batching and parallelization. Rewrote ZK verifier parsing logic, reducing gas cost ~4x.
- Designed contract-based testing across Rust, Go, and Solidity - caught serialization mismatches and verified end-to-end proof correctness across the ZK pipeline.

Software Developer, Booking.com - May 2017-May 2021

Amsterdam, Netherlands

- Built microservices integrating tours & activities providers - imported 50K-100K listings plus real-time availability across multiple APIs. Java, MySQL, Kafka.
- Ran A/B experiments on booking and cancellation flows serving millions of users - reduced cancellation-related support tickets ~20%, increased transactions ~10%.
- Operated highly available services - triaged production incidents, led root-cause analysis through Booking's "Reason for Outage" process.

Software Developer, Toptal - 2015-2017

Saint-Petersburg, Russia; Remote

- Built automated billing and payout system for EV charging company (EverCharge) - customer signup, invoicing, and operator payouts. Reduced payout preparation from over a week to less than a day. Python, Flask, PostgreSQL, AWS.
- Built gig worker payout platform (Walkio) - direct payments to workers with tax-compliant fee routing as the platform scaled.

Performance & Test Engineer - Devexperts, Dino Systems, Positive Technologies - 2011-2015

Education

ITMO University, Saint Petersburg, Russia - Master's Degree in Information Technology, 2012.

Skills

Languages: Rust (primary), Go, Python, Java, Solidity
Rust ecosystem: Tokio, serde, borsh, tracing
Storage & messaging: RocksDB, PostgreSQL, MySQL, Kafka, ElasticSearch
Observability: Grafana, Prometheus, InfluxDB
Infra: Docker, Kubernetes, AWS, GitHub Actions
Blockchain: Rollups, EVM, DA layers (Celestia), ZK proofs (SP1, RISC0), Hyperlane