Nikita Lobanov

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Education

British Columbia Institute of Technology Expected April 2026
Full Stack Web Development Specialization *Vancouver, BC*

- **Relevant Coursework**: Distributed Systems, Operating Systems, Database Management, Computer Architecture, Algorithms
- **Extracurricular**: BCIT Computing Club Member, Peer Mentorship

Skills

Languages: Go, TypeScript, Python, C, Java, SQL (PostgreSQL, Oracle, Maria), Bash, Lua
Backend & Systems: Node.js, Spring Boot, gRPC, Redis, Postgres, MongoDB, Concurrency (Goroutines), Pub/Sub
Infrastructure: Linux, AWS (EC2, Lambda, S3, ECR), Docker, Terraform, Kubernetes, GitHub Actions, Prometheus, Grafana
Systems Design: TCP/IP, Socket Programming, OAuth 2.0, RBAC, Rate Limiting, Graph Theory, Distributed Caching

Experience

Vero Ventures Jan 2026 – Present
Software Engineer Intern (Co-op) *Vancouver, BC*

- Joining a 5-person engineering team to architect and build a greenfield SaaS application from the ground up, working directly under the mentorship of senior developers to define the initial technical stack.
- Establishing CI/CD pipelines and automated quality guardrails to enforce code integrity, ensuring a tight feedback loop from local development to production deployments.

Seaspan Corp May 2024 – Aug 2024
Software Engineer Intern *Vancouver, BC*

- Worked on internal tooling and telemetry systems supporting maritime fleet operations, accounting, and data analysis.
- Reduced propulsion anomaly detection time by 10x by engineering a streaming telemetry pipeline in React that transformed 500+ MB of raw Oracle engine logs into real-time actionable time-series metrics via WebSockets.
- Automated 160+ hours of manual data reconciliation monthly by optimizing a high-throughput Spring Boot microservice to validate 1,400+ complex XML/Excel files via direct ERP API integration and custom validation protocols.
- Achieved a 99.8% reduction in SQL reporting latency (4 min to under 500ms) by implementing composite indexes and materialized views on partitioned tables for strict RBAC-compliant data access.
- Hardened internal data integrity by developing a robust error-handling layer in PL/SQL to catch edge-case telemetry corruption, reducing database write-failures by 15% during peak maritime data ingestion.

Affistash March 2023 – April 2024
Software Developer (Part-Time Contract) *Remote*

- Joined a founding team of 3 to build and launch a B2B SaaS platform that automates partnerships between brands and affiliate marketers, building a Next.js full stack application integrated with Firebase and a Framer landing page.
- Maintained 99.9% system availability during high-traffic bursts by engineering a distributed sliding window rate limiter with Redis to enforce dynamically configurable, tiered usage limits.
- Scaled analytics engine to support 1,000+ brand records with sub-50ms response times by architecting a server-side search system with dynamic query building for complex multi-filter enterprise dashboard requests.

Projects

Stochi | *Next.js 16, Go, Postgres, pgvector, Web Workers* Dec 2025 – Present

- Developed a bio-optimization full-stack app for supplement logging that tracks pharmacokinetics to detect dangerous or suboptimal supplement interactions and timing conflicts.
- Architected a hybrid system that offloads heavy mathematical modeling to a dedicated Go service deployed on fly.io, calculating Michaelis-Menten kinetics and Lambert W functions without blocking the Node.js event loop.
- Implemented zero-latency semantic search by running a quantized LLM (`all-MiniLM-L6-v2`) entirely in the browser via Web Workers, enabling offline-capable fuzzy matching and research summaries for supplements without server round-trips
- Designed a normalized PostgreSQL schema with 17 tables, utilizing JSONB for flexible pharmacokinetic parameters while maintaining strict relational integrity for user medical history.

Panday | *Next.js, Go, PostgreSQL, pgvector, Redis Streams* Sep – Dec 2025

- Developed a career guidance platform for skilled trades apprentices that visualizes certification pathways, utilizing React Flow and D3-force physics to automatically arrange over 100 roadmap nodes in a deterministic, readable layout.
- Achieved 100% dev/prod parity by engineering a custom Redis reverse proxy in Go that translates HTTP requests to TCP, bridging local Docker containers with serverless Upstash drivers to eliminate protocol mismatches.
- Optimized the graph rendering loop by writing a grid-based spatial partitioning algorithm, reducing collision detection complexity from $O(n^2)$ to $O(n)$ for high-performance interaction.
- Engineered a fault-tolerant RAG pipeline using Redis Streams to buffer writes and a 5-minute in-memory cache, reducing embedding API costs by $\sim$80%.