Nikita Lobanov

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EDUCATION

British Columbia Institute of Technology
Full Stack Web Development Diploma
Expected April 2026
Vancouver, BC
- Leadership & Community: BCIT Computing Club Member, Peer Mentorship Program

Langara College
Associate of Science, Computer Science
September 2022 - April 2024
Vancouver, BC

EXPERIENCE

Vero Ventures
Software Engineer Intern
Jan 2026 – Present
Vancouver, BC
- Engineered a distributed Python web scraper using Playwright and AsyncIO to ingest 40,000+ insurance advisor leads from 6 major directories, implementing proxy rotation and rate limiting to build a lead list of insurance advisors.
- Architected Terraform IaC for Cloudflare CI/CD with GitHub Actions, ephemeral previews, Playwright E2E, and SonarCloud for 10+ daily zero-downtime deploys.

Seaspan Corp
Software Development Intern
May 2024 – Aug 2024
Vancouver, BC
- Accelerated maritime anomaly detection 10x by building a real-time telemetry pipeline processing 500MB+ daily Oracle engine logs via WebSockets, aggregating vessel sensor data into time-series React dashboards for fleet operations teams.
- Eliminated 160+ monthly manual hours by optimizing a Spring Boot microservice with circuit breakers to validate 1,400+ EDI/CSV freight manifests via Oracle ERP integration.
- Cut SQL reporting latency by 99.8% (4 min to under 500ms) by designing composite B-tree indexes and PostgreSQL materialized views on 50M+ row partitioned tables, enforcing strict RLS policies for multi-tenant maritime data access.
- Hardened data ingestion resilience by developing a PL/SQL error-handling framework, reducing database write-failures by 15% during peak ingestion and ensuring zero data loss for vessel telemetry.

Affistash
Full-Stack Developer (Contract)
March 2023 – April 2024
Remote
- Joined a founding team of 3 to launch a B2B SaaS affiliate marketplace; architected core Node.js/Express infrastructure automating brand-partnership matching with Stripe integration for subscription management.
- Engineered a distributed sliding-window rate limiter using Redis Lua scripts to enforce tiered API quotas (30 req/min standard, 100 req/min enterprise), maintaining 99.9% availability during 10x traffic bursts from Product Hunt launches.
- Scaled analytics search to support 1,000+ brand records with sub-50ms response times by implementing PostgreSQL full-text search with trigram indexes (pg_trgm) and dynamic query builders, replacing inefficient regex filters causing request timeouts.

PROJECTS

Stochi | *Next.js 16, Go, PostgreSQL, pgvector, Web Workers* — Dec 2025 – Present
- Built a bio-optimization platform using Next.js and Go microservices to track supplement pharmacokinetics, implementing 1,000+ absorption models with sub-millisecond latency calculation via dedicated Go service.
- Engineered a zero-latency client-side search engine running quantized LLMs (Transformers.js) in Web Workers for fuzzy matching, eliminating server costs for 90% of queries while enabling offline PWA support.
- Designed a normalized PostgreSQL schema with pgvector extension for 1536-dimensional embeddings, implementing HNSW indexes for sub-second semantic search across research knowledge base with automatic safety guardrails.
- Enforced toxicological safety across 1,000+ supplements by implementing deterministic guardrails with hard-coded FDA limits (Zinc 40mg, Iron 45mg) bounding all AI-generated suggestions and preventing dangerous dosage recommendations.

Panday | *Next.js, Go, PostgreSQL, Redis Streams* — Sep – Dec 2025
- Led a cross-functional team of 4 developers and 4 designers to build an interactive career roadmap platform for BC skilled trades, featuring D3.js and React Flow visualizations guiding apprentices through levels 1-4 with AI-powered guidance.
- Architected a Redis reverse proxy in Go translating HTTP to TCP to bridge serverless/local protocol mismatches, achieving 100% dev/prod parity across environments.
- Established GitHub Actions CI/CD pipelines with branch protection rules, enabling 4 junior developers to effectively contribute to the 54,000-line codebase and ship 515+ Vitest tests with zero production regressions.
- Reduced roadmap collision detection complexity from $O(n^2)$ to $O(n)$ using grid-based spatial partitioning, supporting 100+ node interactive visualizations with deterministic D3-force physics layouts.
- Shipped dual-mode voice transcription using Web Speech API with OpenAI Whisper fallback, optimizing 128kbps audio streams with adaptive timeout handling for hands-free career guidance.

TECHNICAL SKILLS

Languages: Go, TypeScript, Java, Python, SQL (PostgreSQL, Oracle), C, Lua
Infrastructure & Systems: Terraform, Kubernetes, Docker, Linux (Arch, Red Hat, Debian), GitHub Actions, Redis
Backend: Node.js, Spring Boot, gRPC, WebSockets, PL/SQL, FastAPI
Frontend: React, Next.js, D3.js, React Flow, Tailwind CSS, Web Workers, Shadcn, Recharts
AI/ML & Data: pgvector, RAG, Transformers.js, LLM Integration, Embeddings, HuggingFace Tasks
Cloud: AWS (S3, EC2, ECS, S3, RDS, Lambda), Cloudflare Workers, Vercel, Fly.io, Neon