

Rikhi Singh

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PROFESSIONAL SUMMARY

Software Engineer specializing in AI-driven, cloud-native SaaS platforms. Proven success designing and scaling distributed systems with TypeScript, Next.js, Bun/Hono, and AWS. Skilled in RESTful and GraphQL API architecture, infrastructure as code, and automation pipelines that boost performance and reliability. Background in Artificial Intelligence (University of Helsinki) with experience integrating LLM and agentic systems to deliver secure, maintainable, and scalable products.

TECHNICAL SKILLS

Languages: TypeScript, JavaScript, Python, C#, Java, Kotlin, Swift, SQL, HTML, CSS

Frameworks & Libraries: Next.js 15, React, Node.js, Hono, Bun, tRPC, Tailwind CSS, ASP.NET MVC, Laravel, Flutter

Databases: PostgreSQL (Drizzle ORM, Neon, TimescaleDB), MySQL, SQL Server, Redis, PostGIS

APIs & Integrations: REST, GraphQL, WebSockets, Clerk Auth, Stripe, Gemini, OpenAI Agentic APIs

Cloud & DevOps: AWS (S3, SES, EC2), Cloudflare Workers, Turnstile, Coolify, Kubernetes, R2 Object Storage, Docker, CI/CD (GitHub Actions), BullMQ, Terraform, CloudFormation, Git

AI & Data: GPT-4o, Gemini, BGE-M3, Pinecone, Qdrant, HNSW, Vector Search, Machine Learning Embeddings

Testing & Monitoring: Jest, Vitest, Grafana, Splunk, LogRhythm

Other: Microservices, System Design, Security Hardening, Accessibility (WCAG/AODA), Agile Development

PROFESSIONAL EXPERIENCE

- Aphantasia Network** Kitchener, Ontario
Mar 2025 – Present
 - Led rebuild of multi-app Phantasia platform (Next.js 15 + Bun Turborepo), a comprehensive CRM, CMS, and research SaaS for the aphantasia community, unifying automations, broadcasts, events, directory, surveys, and LMS modules, improving developer efficiency and release cadence by 45%.
 - Architected backend with Hono + PostgreSQL (Drizzle ORM) + Redis queues; implemented schema-separated database with PostGIS and pg-vector.
 - Integrated GPT-4o and Stripe APIs to power semantic automations, subscription billing, and payment workflows, reducing manual tagging 60%.
 - Built CI/CD pipelines (GitHub Actions) and Dockerized microservices on AWS (S3, SES) integrated with Cloudflare Runners, reducing deployment time by 40%.
 - Strengthened platform security with Zod validation & RBAC; lowered vulnerability incidence 40%.
- Eptics Inc.** Remote / Canada
Jul 2024 – Feb 2025
 - Led a four-person team to build an AR-based lab platform (mobile + admin panel), reducing delivery time by 25%.
 - Developed Next.js farm e-commerce site with AI-powered crop recommendation engine; increased engagement by 40%.
 - Configured Splunk anomaly detection dashboards and LogRhythm alerts; reduced false positives by 15% and incident response time by 10%.
 - Implemented containerized deployments with Docker, CI/CD automation, and infrastructure as code; improved reliability by 30%.
 - Collaborated with product and data teams to standardize code review processes and deployment practices.
- University of Guelph** Guelph, Ontario
Sep 2023 – Jul 2024
 - Built and enhanced web features using ASP.NET MVC (C#) and JavaScript, improving UX and site performance.
 - Created Java and Python utilities automating daily admin workflows; reduced manual errors by 60%.
 - Migrated SQL Server databases, optimizing queries and improving CRUD performance by 18%.
 - Patched high-risk ColdFusion vulnerability and conducted dependency audits to ensure data protection.
 - Developed public website meeting WCAG 2.1 and AODA standards; collaborated with accessibility auditors.

SELECTED PROJECTS

- **Tenantrio (Founder & Full-Stack Engineer):** Built a full-stack property management platform enabling landlords to manage tenants, leases, finances, and maintenance from a single dashboard. Developed with Next.js 15, TypeScript, Drizzle ORM, and PostgreSQL; integrated Better Auth for secure access, Tailwind CSS 4 for responsive UI, and Recharts for analytics. Deployed via Docker and GitHub Actions on AWS with infrastructure-as-code automation.
Tech Stack: Next.js 15, TypeScript, Drizzle ORM, PostgreSQL (Neon + Timescale), Tailwind CSS 4, Better Auth, AWS, Docker, CI/CD.
- **BeaverMade.ca (Founder & Full-Stack Engineer):** Built and launched a free platform helping Canadians identify and support local products through AI-powered image recognition. Developed native apps in Kotlin and Swift, reaching 10,000+ users within 48 hours and featured by CBC and Toronto Sun. Integrated Gemini, OpenAI Agentic APIs, and Pinecone for large-scale vector search across millions of products.
Tech Stack: Kotlin, Swift, Next.js, TypeScript, Tailwind CSS, OpenAI, Gemini, Pinecone, Qdrant, HNSW, AWS.
- **Better Auth (Open-Source Contributor):** Contributing to a modern authentication framework enabling secure SSO and Stripe-based subscription integrations for SaaS products. Implemented role-based access flows, improved JWT handling, and optimized token lifecycle management for performance and reliability.
Tech Stack: TypeScript, Node.js, NextAuth, JWT, Stripe API, PostgreSQL, Redis, Bun, CI/CD.
- **Unreal Engine (Contributor – Performance Optimization):** Contributed to Epic Games' Unreal Engine 5 core, focusing on low-level C++ optimizations improving CPU/GPU rendering throughput and reducing frame latency by 12–15%. Worked on profiling memory allocation patterns and optimizing shader compilation pipelines in C++ and HLSL.
Tech Stack: C++, Unreal Engine 5, HLSL, GPU Profiler, Visual Studio, Perforce, RenderDoc.

EDUCATION

- **Conestoga College (High Distinction)** Waterloo, ON
Diploma in Computer Programming, GPA: 3.91 *Sep 2023 – Apr 2025*
- **University of Helsinki** Helsinki, Finland
Certificate in Artificial Intelligence, GPA: 3.8 *Jan 2021 – Dec 2022*

KEY ACHIEVEMENTS

- Delivered 3 full-stack SaaS platforms from concept to launch, boosting engineering throughput 45%.
- Integrated AI/ML workflows that cut manual operations by 60% and increased user engagement across two products.
- Built and maintained APIs serving 70K+ monthly users with 99.9% uptime on Cloudflare.
- Maintained 3.9+ GPA while delivering production-grade software for academic and commercial clients.