

Staff Software Engineer with **10+ years across design and engineering**, building the **systems, abstractions, and architectural foundations** that teams and products build on — from a national loyalty platform (**Aeroplan**) to regulated fintech (**PayPower Mastercard**) to mission-critical industrial control systems (**Beyond MPD**). Strong in **TypeScript, Node.js, React, OpenTelemetry**, and **developer-facing SDK design**; uses **Claude Code** and **Cursor** daily. Drives **cross-team alignment** and **coaches engineers** without losing hands-on delivery.

## EXPERIENCE

### INDEPENDENT PROJECTS

#### Career Break — Jul 2025 – Present

Toronto, Canada

- Shipped tko.dev (portfolio) and TechTank TO community platform (next.techtankto.com) — full-stack Next.js apps with custom design systems and Vercel deployments; developed solo using Claude Code, Cursor, and v0.
- Developing Gridflow — social media scheduling app with Next.js, Supabase (Auth, Database, Storage), TanStack Query, and React Hook Form; demonstrates full-cycle product ownership from PRD to deployed code.

### TELUS DIGITAL

#### Senior Software Engineer — Dec 2024 – Jun 2025

Toronto, Canada - Full Time

- Architected a cross-platform OpenTelemetry SDK (Node.js / Next.js) adopted across multiple Loblaws Digital LOBs: flexible abstractions supporting divergent Next.js versions, server and browser runtimes, and LOB-specific instrumentation requirements without fragmentation.
- Proposed SDK architecture, data flows, and Grafana dashboard POC to engineering leads and executives; drove technical alignment on observability strategy across platforms and affiliated projects.
- Implemented distributed traces, metrics, and logs using low-level OpenTelemetry APIs; built custom transformations feeding VictoriaMetrics / Tempo / Grafana; enabled P95 latency diagnostics and SLO monitoring.
- Built a Zustand state store with historical tracking to enrich trace context across server and client runtimes; designed for extensibility across varying LOB requirements.
- Co-led technical design conversations with engineering leads across LOBs to establish instrumentation standards, naming conventions, and sampling strategies that made multi-LOB observability data comparable and actionable in Grafana.

#### Staff Software Engineer — May 2023 – Nov 2024

Toronto, Canada - Full Time

- Participated in discovery and refinement sessions with product owners and the client's engineering team; interviewed client engineers to surface system, integration, and hardware constraints; contributed to timeline and cost estimates and created proof of concepts to validate major architectural decisions before implementation.
- Co-developed event-driven architecture integrating PLCs, communications buses, and sensors for reliable command/status communications across safety-critical oil rig control systems.
- Built real-time and historical data visualization rendering 10,000+ data points with subsecond tolerance using SVG and Canvas; authored interpolation algorithms for fluid pressure control and validation schemas enforcing data integrity.
- Developed and optimized CI/CD pipelines coordinating software lifecycle events across multiple environments; contributed to global deployment standards across varying rig hardware configurations.
- Co-developed a Figma design system for the Olympus platform and co-engineered back-end calibration solutions for chokes and sensors; contributed to unit conversion and formatting standards across globally distributed rig deployments.

### QUANTUM MOB

#### Staff Software Engineer — Nov 2022 – May 2023

Toronto, Canada - Full Time

- Spearheaded Quantum Mob's Vercel partnership: led R&D and technical content that culminated in an official partnership in Q1 2023; delivered architecture proposals and RFPs for international retail and real estate clients.
- Developed department-wide architectural standards, CI/CD improvements, and an evolving team role matrix; mentored SE1 through Senior engineers via biweekly coaching and structured goal-setting.
- Founded and ran Quantum Talks — a weekly company-wide knowledge-sharing initiative covering architecture, tooling, and engineering practices; presented on Turborepo and React Query.
- Designed and executed the hiring process for SE1 through Senior roles: structured interview criteria, evaluation rubrics, and team-growth alignment.
- Delivered technical proposals, comprehensive estimations, and strategic initiative planning alongside Senior Engineers, aligning engineering capabilities with sales and client growth.

#### Senior Software Engineer — Nov 2021 – Oct 2022

Toronto, Canada - Full Time

- Designed and maintained a Turborepo monorepo across PayPower's white-label mobile and web products: shared component libraries, dependency management, and 12 CI/CD pipelines spanning iOS, Android, and Web.
- Established Sentry monitoring and analytics across all CI/CD pipelines; directed incident response for critical security, deployment, and prod issues.
- Led system design for the Aeroplan cross-browser extension: reusable architecture consistent across Chrome, Firefox, Safari, and Edge.
- Secured and led three new PayPower client engagements by identifying platform-level opportunities and building the business case with leadership.

EXPERIENCE

**QUANTUM MOB**

**Software Engineer II – Nov 2020 – Oct 2021**

Toronto, Canada - Full Time

- Led system design for Aeroplan's redemption platform: React/Redux architecture, Air Canada API integrations, localization, item variant indexing with binary masking, and checkout flow for a high-traffic national loyalty program.
- Designed component library and BEM SASS theming systems; achieved 80%+ test coverage with React Testing Library and Jest; led five-engineer accessibility overhaul to AODA/WCAG 2.0 AA.
- Proposed and secured three new Aeroplan engagements covering architecture refinement, theming systems, accessibility compliance, and integration testing strategy.
- Designed and built RocMar Engineering's employee productivity dashboard: implemented OAuth/OIDC and API-token-based server-side data collection across four integrations with user-initiated auth flows; built dynamic SVG data visualizations surfacing millions of historical data points as actionable productivity insights.

**QUANTUM MOB**

**Software Engineer I – Nov 2019 – Oct 2020**

Toronto, Canada - Full Time

- Contributed React components for the Air Miles landing portal as part of a large team within an existing monorepo; applied BEM SASS standards.
- Led development of internal platform tooling: white-label product catalog, CI/CD pipeline generation infrastructure, and reusable monorepo modules for client projects.

**BRANDFIRE MARKETING GROUP**

**Intermediate Front-End Developer – Apr 2017 – Nov 2019**

Markham, Canada - Full Time

- Built Koa/Express APIs with Passport.js/OAuth, MySQL schemas, and CI/CD pipelines across AWS, Shopify, and Linux; authored technical requirement analysis and data flow diagrams for Toyota, Canada Dry, and others.
- Designed and implemented MySQL database schemas and developed RESTful API endpoints for scalable data access across multiple clients.
- Developed front-end solutions using Angular.js, Vue, and Ractive.js, translating designs into responsive, AODA AA/WCAG 2.0 compliant web apps.
- Ensured code quality and reliability with Mocha.js unit and end-to-end testing integrated into Agile Scrum QA workflows.

**KO'S INTERIOR DESIGN AND CONSTRUCTION**

**Interior Designer – Jul 2013 – Sep 2016**

Toronto, Canada - Full Time

- Managed 40+ residential and commercial design projects: 3D modeling, electrical and building code, client coordination, and quote estimation.

COMPETENCIES & TOOLS

**Core Competencies** — Platform Architecture, SDK Design, Observability Engineering, Technical Leadership, Cross-team Alignment, Hiring & Mentorship  
**Languages & Frameworks** — TypeScript, JavaScript, Node.js, React, React Native, Next.js, Express, tRPC, gRPC  
**UI & Styling** — Tailwind CSS, shadcn/ui, Radix UI, Framer Motion, GSAP, SASS, Material UI, Mantine, Bootstrap, CSS Modules  
**Observability & Platform** — OpenTelemetry, Grafana, VictoriaMetrics, Tempo, Sentry, RabbitMQ  
**Analytics** — Mixpanel, Google Analytics, Google Tag Manager  
**Tooling & DevOps** — Claude Code, Claude Design, Cursor, v0, Turborepo, Vite, Docker, CI/CD, GCP, AWS  
**Testing** — Jest, React Testing Library  
**Databases & ORMs** — PostgreSQL, MySQL, MongoDB · Drizzle, Prisma, TypeORM

EDUCATION & VOLUNTEER

**TechTank Toronto**

DIGITAL LEAD & ORGANIZER  
OCT 2024 - PRESENT · VOLUNTEER

**OCAD University**

BACHELOR OF DESIGN, ENVIRONMENTAL DESIGN  
2013 - 2016

**freeCodeCamp**

FULL STACK DEVELOPMENT CERTIFICATIONS (4x)  
2016 - 2019