



PROFESSIONAL EXPERIENCE

Full work history on [LinkedIn](#)

Staff Software Engineer - Web Lead for Loblaws Digital Telemetry Project

Dec 2024 – Jun 2025

Badal.io (Contract, Full-Time)

Toronto, ON (Remote)

- Architected a cross-platform telemetry SDK package (Node.js / Next.js) using low-level OpenTelemetry APIs, adopted across multiple lines of business (LOBs) within Loblaws Digital.
- Proposed scalable web architecture, SDK structure, data flows, and Grafana dashboard POC to leadership and executive team across LOBs, platforms, and affiliated projects.
- Co-led technical design conversations with engineering leads to collect requirements and alignment on instrumentation strategy and telemetry adoption.
- Implemented core telemetry events and instrumentation patterns (traces, metrics, logs), ensuring compatibility with both server-side (Node) and client-side (browser) runtimes.
- Abstracted differences in LOB-specific needs, Next.js features/versions, and runtime environments (web, mobile) to deliver a flexible and reusable SDK.
- Built a Zustand powered state store with historical state tracking to enrich trace context and frontend observability.
- Designed and developed custom data transformation logic to feed into the broader VictoriaMetrics, Tempo, and Grafana observability stack.
- Enabled organization-wide insights into performance metrics including page load durations, frontend error rates, and SLO breaches — with emphasis on actionable P95 latency breakdowns and user-centric diagnostics.

Staff Software Engineer - Modern Oil Rig Platform for Beyond MPD

May 2023 – Nov 2024

Badal.io (Contract, Full-Time)

Toronto, ON (Remote)

- Contracted to co-lead a high-impact modernization initiative for Beyond MPD, transforming legacy systems to a next-generation architecture interfacing with oil rig panels, communications buses and PLCs.
- Co-developed an event-driven architecture using event brokers for robust command and status communications across critical control systems.
- Co-developed a design system in Figma, ensuring a consistent and user-friendly interface across oil rig applications.
- Co-engineered back-end solutions to support calibration and seamless integration of chokes, and sensors, managing essential data streams for oil rig operations.
- Co-authored critical interpolation algorithms for precise fluid pressure control, with rigorous unit tests to ensure safety and accuracy.
- Created real-time and historical data visualization solutions capable of tracking over 10,000 data points with sub second tolerance, leveraging SVG and Canvas for highly responsive, interactive, animated graph elements.
- Contributed to precise unit conversions and formatting standards to accommodate global deployment requirements across various oil rig specifications.
- Developed validation schemas to enforce data integrity and ensure client-server data remains within defined limits.
- Developed and optimized CI/CD pipelines to streamline deployment and updates, coordinating software lifecycle events across multiple environments.
- Designed and delivered project management presentations to enhance team skills and streamline processes.

**T K O****Tony Ko**Staff Software Engineer - tko.dev

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PROFESSIONAL EXPERIENCE - PT.2

Full work history on [LinkedIn](#)

Staff Software Engineer

Nov 2022 – May 2023Quantum Mob (*Full-Time*)

Toronto, ON (Hybrid)

- Spearheaded Vercel partnership, technical content and proposals that culminated in a Q1 2023 partnership.
- Led R&D and strategic planning for international retail/real estate clients; provided mentorship and designed hiring structures to support team expansion.
- Drove department-wide strategic initiatives and architectural improvements in partnership with Senior Engineers, optimizing project and resource alignment.
- Enhanced application architecture for enterprise projects, integrating Next.js, Docker, and Serverless solutions to support scalability.

Senior Software Engineer

Nov 2021 – Oct 2022Quantum Mob (*Full-Time*)

Toronto, ON (Hybrid)

- Led architecture for Aeroplan's cross-browser extension and PayPower mobile app, securing three new client engagements through feature enhancements and refactors.
- Maintained 12 mobile CI/CD pipelines and integrated monitoring tools for improved app resilience.
- Hosted "Quantum Talks," a knowledge-sharing initiative, and presented on Turborepo and React Query.
- Designed and executed hiring process improvements for SE1 to Senior Engineers, optimizing for skill alignment.

Software Engineer II

Nov 2020 – Oct 2021Quantum Mob (*Full-Time*)

Toronto, ON (Hybrid)

- Led system design for Aeroplan's redemption platform, securing contracts for architecture refinement and accessibility improvements.
- Integrated API, localization, and UI features; conducted code reviews to maintain high-quality standards.
- Directed a 5-person team for an AODA/WCAG accessibility overhaul, achieving compliance and enhancing UX.
- Created Figma designs for an internal dashboard, standardizing visuals and functionalities.

Software Engineer I

Nov 2019 – Oct 2020Quantum Mob (*Full-Time*)

Toronto, ON (Hybrid)

Intermediate Software Engineer

Apr 2017 – Nov 2019Brandfire Marketing Group (*Full-Time*)

Toronto, ON (In Person)

ACADEMIC HISTORY

9+ Recommendations on [LinkedIn](#) & Refs Available

Full Stack Development Certs (4x)

2016 – 2019

FreeCodeCamp

Toronto, ON (Remote)

B.Design, Environmental Design

2013 – 2016

OCAD University

Toronto, ON (In Person)