

Engineer who leads from the technical side: setting the architecture, shaping the project, and building alongside the team. 20 years across high-performance backend systems, scalable infrastructure, and full-stack applications, from founding engineer to Head of Engineering, at early-stage startups and at enterprise scale. Passionate about beautiful code, and driven to build software that genuinely changes people's lives for the better.

Principal Software Engineering Manager - Microsoft

Seattle, WA • Aug 2025 - Present

Technical lead for an internal platform that runs browser automation at scale, for AI agents and for jobs like UX testing and crawling. Own the platform's architecture and technical direction end to end.

- Shaped the platform around two ways to drive a browser at scale - direct programmatic control, and an agent interface that takes a natural-language task and returns structured output - so it serves hand-written automation and AI agents alike.
- Joined as Principal Software Engineer to drive the platform's architecture, and was promoted to Principal Software Engineering Manager in under a year; now lead the five-person team building it while staying hands-on.

Head of Engineering - Granted Health

Remote (Seattle, WA) • Jul 2023 - Aug 2025

First engineer at an early-stage healthcare advocacy startup. Laid the architecture, stack, and engineering practices for its D2C app, then led technical direction as Head of Engineering, growing the team past ten.

- Designed and built the platform and codebase from scratch, optimized for scalability, maintainability, and developer productivity - TypeScript top-to-bottom, with Pulumi (infra-as-code), Tamagui (cross-platform UI), and Gel (data).
- Architected a custom ETL pipeline and an agentic workflow system for automating complex case resolution.
- Hired 10+ engineers in 12 months, with onboarding that had new engineers committing code on their first day.
- Set the engineering standards, documentation, and planning rituals behind a high-autonomy, high-accountability culture.

Founding Engineer - Ravel Data

Seattle, WA • Jun 2022 - Apr 2023

(Part-time engagement while on sabbatical - see page 2).

Staff Software Engineer - Oscar Health

New York, NY + Remote (Seattle, WA) • Nov 2015 - Jun 2022

Founding member and technical leader on Oscar's next-gen claims processing engine. The system processes claims in under 10s (P90), with an industry-leading auto-adjudication rate (no human intervention) of 95%+.

Staff Tech Lead and Manager (2020-2022): Returned to the Claims System team to lead 15 engineers and 2 managers.

- Set technical strategy across authorizations, cost-sharing, benefits, accumulators, repricing, and adjustments.
- Led a complex multi-year migration off a legacy third-party claims processing system while ensuring business continuity.

Staff Software Engineer (2019-2020): IC role in Engineering Infrastructure. Built an internal web-based gRPC querying tool, used heavily by engineers and non-technical users alike, and contributed to a platform streaming MySQL and PostgreSQL replication logs into sinks such as BigQuery and Kafka, replacing several bespoke solutions.

Staff Tech Lead and Manager (2018-2019): Founded the Plans and Benefits team, growing it to five backend engineers in a year, and set its multi-year technical roadmap for stewarding plan and benefit data across Oscar.

Senior Software Engineer (2015-2018): Founding member of the Claims System team.

- Key technical decision-maker; led design and implementation of core system features, including accumulators, pipeline orchestration, and object lookup storage, within a microservices architecture (Go, gRPC, PostgreSQL, Kafka/Confluent).
 - Designed, implemented, and evangelized a novel bitemporal storage platform on PostgreSQL, used by multiple teams at Oscar. YAML schemas are code-generated into SQL, ORM, and service definitions, and the platform manages entity history transparently while database constraints prevent bitemporal inconsistency.
 - Designed a custom domain-specific language for business logic, combining Lua with a custom type-checked language for safety. Insurance domain experts used it to configure the system and write unit tests.
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Experience Cont'd

Founding Engineer (Part-time) - Ravel Data

Seattle, WA • Jun 2022 - Apr 2023

Sole engineer for web scraping and analytics startup, delivering a production-ready B2B marketing and sales product.

- Built out a highly productive Python codebase from the ground up, including web crawler, data models, supporting scripts, documentation, and engineering infrastructure, designed for an easy handoff to a new technical cofounder.
- Designed Scrapy-based crawler that regularly evaluated 9000 identifiers across 100k+ sites in 6h across 400 workers.
- Developed Retool dashboards enabling non-technical users to configure and monitor data pipelines.

Software Development Engineer II - Microsoft

Seattle, WA • Oct 2010 - Aug 2015

Machine learning and infrastructure work on core ranking and personalization, first in Bing's Contextual Relevance group and then on Cortana's proactive card ranking, partnering closely with Microsoft Research.

- Engineered a system for surfacing Cortana personalized ranking features (computed daily from user logs) online with minimal effort from data scientists - unlocking advanced inference across multiple user dimensions (e.g., demographics, location).
- Brought new research ranking techniques to the Bing live site, such as Category-Promoted Search with Paul Bennett, which modeled user intent over time and reordered web results by similarity to the user's profile.
- Built a centralized service exposing user data and models from across the Bing stack in one easy-to-consume schema.
- Migrated critical personalization features from a C++ monolith into C# with a completely new service paradigm.
- Designed and delivered a critical fix to Bing's ranking, which stabilized web results between identical queries from the same user. This was delivered in two days, and required no further maintenance.

Software Engineer - Canary Data Solutions

Auckland, New Zealand • Nov 2006 - Oct 2010

Led full-stack development and client engagements for custom small business software solutions in a <10-engineer team.

- Led the account for a high-volume vehicle dismantling operation in Japan - a public website and multiple internal systems covering vehicle purchase, dismantling, inventory, and invoicing, built on ASP.NET and MSSQL.
- Modernized engineering practices, replacing Subversion with Mercurial and pushing for unit tests on all projects.

Competencies

Versed in many languages and frameworks; fast learner on new platforms.

Strongest current expertise in TypeScript, Python, Go, and C++; utilizing React, Next.js, Expo, Pulumi, Terraform, PostgreSQL, Docker, etc.

Strong background in complex backend systems, observability and testing, databases (relational and non-relational), full-stack development, team-oriented development practices (source control, bug management, documentation), and managed cloud services.

Recent focus on infrastructure for AI agents, from browser automation at scale to agentic workflows that automate complex case resolution.

Technical leadership across tech lead, engineering manager, and Head of Engineering roles, while staying hands-on in the code.

Education

Bachelor of Engineering

2005 - 2008 • University of Auckland

Specialized in Software Engineering.

800+ hours of industry experience pre-graduation.

Note: I am a US citizen.

References

Available upon request.