

Alexander R. J. Keller

Summary

Platform engineer who builds the developer infrastructure that other engineers depend on. Currently managing shared backend platform for 120 engineers. Internal CLIs, Cloud Development Environments, observability, and agentic AI tooling. Experience prototyping MCP servers, evaluating new developer tools, and shipping productivity improvements that move a dozen teams forward.

Experience

Top Hat

2021-03 — Present

Engineering Manager

- Manage Core Backend team owning shared infrastructure (message queue, database clients, telemetry, authentication, email queue) used by 120 engineers across 12 teams
- Daily power user of agentic developer tools (pi, Claude Code, Qwen) to accelerate coding, debugging, and code review; actively evaluating and prototyping MCP servers to build new public API for company
- Drove architectural maturity: established disciplined technology selection and migration processes to curb platform fragmentation across the backend org
- Vendor primary contact for Sentry, Honeycomb; reviewed AWS spend and implemented cost-saving measures; leading CommerceTools migration to internal replacement (projected \$150k/year savings)
- Designed and executed technical architecture for SOC2/ISO 27001 compliance

Senior Engineer - Tech Lead (2021-2025)

- Built th-dev-cli: company-wide internal developer CLI (Python) for database access, Docker Compose orchestration, and development workflows used by the engineering org
- Designed developer Cloud Development Environment (CDE) via Docker Compose orchestration, standardizing local dev setup across the org
- Built th-token and th-repl for rapid backend API debugging, reducing iteration time for developers working on services
- Owned database layer, queues, observability stack, authentication, and file upload infrastructure serving 100k+ requests per second to 1M+ active students
- Python lead for the organization; led MySQL to PostgreSQL migrations across multiple services
- Regular internal speaker on API Design, Performance-Aware Python, HTTP, and Developer Communication; ran tech talks forum to foster knowledge sharing

Canadian Broadcasting Corporation

2017-07 — 2021-03

Senior Machine Learning Developer

- Built YAML-driven infrastructure provisioning tools (custom Terraform-like system) for Bigtable and GCP resources, standardizing how the team spun up and managed cloud infrastructure
- Built local development tooling and infrastructure monitoring/logging systems to close the loop between deployment and feedback
- Founding member of ML team; built full-stack ML platform of 7 microservices with end-to-end CI/CD, build systems, and test infrastructure
- Designed and operated data warehouse on Bigtable (~10 TB); kept total infrastructure cost at ~\$20k/year through lean design
- Full-stack ownership: containers, APIs, models, data engineering, ETL, CI/CD, and operations

Expertise

Developer Experience: Internal CLIs (Python/Go), MCP servers, CDEs, build systems, CI/CD, developer platforms at 100+ engineer scale

Agentic AI: Daily use of pi, Claude Code, Qwen to accelerate engineering productivity; MCP server prototyping, evaluation, and adoption strategy

Languages: Python (expert), Go, TypeScript, JavaScript, Bash (expert)

Backend: Django, FastAPI, Flask, REST APIs, Microservices, Event-Driven Architecture

Infrastructure: Docker (expert), AWS, GCP, Terraform, Ansible, OpenTelemetry (expert)

Developer Tooling UIs: React, Redux, TypeScript, HTML5/CSS3 (expert)

Operating Systems: POSIX/BSD/Linux/macOS (expert), Windows

Projects & Open Source

- **ve3zsh.ca** – Personal website and tool distribution site. Custom-built with vanilla JavaScript, custom reactive core library, and Go API backend
- **E-Ink Calendar** – Large-format wall calendar driven by ESP32 and 12.48" e-paper display; Arduino C++ with SPI interface
- **i3blocks** – Contributor to the i3 window manager ecosystem; created and maintained multiple upstream i3 blocks

Education

University of Ontario Institute of Technology

uoit.ca

- M.Sc. in Computer Science – Thesis: Data Curation with Ontology Functional Dependencies
- B.I.T. in Networking and IT Security