

I'm a software architect, engineer, and technical leader with 20 years of experience building web applications and distributed systems — primarily at early- and mid-stage startups. I've led small, fast-moving teams as both an IC and manager, often driving product architecture, technical strategy, and system design. I bring a founder's mindset to the engineering function, taking ownership of outcomes and focusing on long-term impact. I care deeply about the craft of software development and helping others do their best work through empathetic, emotionally intelligent leadership.

- **Languages:** Clojure, Rust, ClojureScript, Python, TypeScript, C++
- **Data:** PostgreSQL, MySQL, Redshift, Redis, Apache Iceberg, Avro, Parquet, XTDB
- **Infrastructure:** AWS, GCP, MS Azure, Kubernetes, Docker, Linux
- **Other:** Hiring, API Design, Git, Websockets, GraphQL, Hasura

## Experience

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### **Patch** • Software Engineer – Contractor April 2023 – Nov 2023

Patch (patch.tech) was a SaaS startup building an acceleration layer for data warehouses. I worked on the infrastructure team, focusing on improving and maintaining the ETL pipeline and query layer.

- Built a Clojure implementation of Apache Iceberg
- Implemented an OTP-inspired actor framework for Clojure
- Worked extensively with Avro, Parquet, Kubernetes (k8s), etcd, and XTDB

### **Fignascent** • Founder, CEO & CTO Nov 2019 – Nov 2022

Founded and led a three-year R&D effort to reimagine how distributed systems and web applications are built and deployed. While the project didn't reach its ultimate goal, it shaped me into a stronger engineer and leader.

- Designed and implemented a fault-tolerant algorithm for distributed storage and computation across large server clusters
- Created a new programming language aimed at unifying backend and database concerns, enabling novel software architectures
- Built and iterated on 40+ experimental prototypes exploring different system models and runtime designs
- Worked primarily in Rust and Clojure

### **Vetd** • Co-Founder & Chief Technical Officer Jan 2019 – Nov 2019

Vetd was an accelerator-backed SaaS startup focused on improving how businesses buy software. As the sole technical co-founder, I built the product from the ground up and led engineering efforts until the company wound down.

- Built and deployed the initial web application as the sole engineer
- Hired and managed a small engineering team
- Designed and implemented a custom GraphQL API using WebSockets and Hasura
- Deployed production infrastructure on AWS using Fargate, RDS, and S3
- Streamlined development with custom Docker tooling
- Worked in Clojure and ClojureScript

### **GlobalFit** • Chief Technical Officer July 2018 – Dec 2018

GlobalFit is a long-standing B2B2C wellness marketplace. I was brought in to navigate a challenging cultural dynamic between leadership and engineering.

- Helped repair the strained relationship between the executive and engineering teams
- Simplified a complex and fragile production deployment pipeline
- Built trust-based relationships with each member of the engineering team
- Supported team members in identifying career growth opportunities

## Magento Commerce • Software Architect

July 2016 – July 2018

Magento is a leading open-source e-commerce platform. Following its acquisition of RJMetrics, I served as the senior technologist on the team responsible for transforming the RJMetrics product into Magento's business intelligence offering.

**RJQL Service** – Led architecture and implementation of the RJQL service – the core engine powering all automated data analysis in the product. RJQL is a proprietary query language that abstracts over diverse data sources including PostgreSQL, Redshift, and Google Analytics.

- Designed and led the implementation of a new execution engine
- Replaced legacy systems (~20k lines of PHP and Hadoop) with ~9k lines of efficient Clojure
- Significantly reduced infrastructure costs by replacing a resource-heavy solution

**Cerebro (ML Initiative)** – Led an exploratory effort to integrate machine learning capabilities into the product roadmap

- Created and executed a clear project plan despite ambiguous business goals
- Researched and applied collaborative filtering algorithms and academic ML concepts
- Built robust dataset generation tooling in Clojure

## RJMetrics • Director of Engineering

July 2012 – July 2016

Senior Software Engineer

July 2010 – July 2012

Second technical hire at RJMetrics, a venture-backed SaaS analytics startup acquired by Magento. Over six years, I helped scale the company from a handful of people to a mature engineering organization. As Director of Engineering, I contributed across leadership, architecture, and hands-on development. Tech included Clojure, PHP, JS, Python, MySQL, Postgres, and AWS.

- **Billing system overhaul:** Led architecture and implementation during vendor transition, designing a CQRS-inspired system with robust scheduling and clean state transitions
- **Developer tooling:** Built tools for API integration development – improved team velocity with omniscient debugging and automated test generation via HTTP traffic replay
- **Chart builder & RJQL:** Led six-month rewrite of core charting UI; designed RJQL, a domain-specific language enabling flexible queries across data sources
- **Architecture & APIs:** Championed transition to service-oriented architecture and helped define the internal REST API spec adopted across teams
- **Mentorship & culture:** Acted as a mentor and cultural anchor – supported career growth, guided teammates through tough decisions, and fostered a healthy, collaborative environment

## Pepper Lillie Ltd • Co-founder & Software Engineer

October 2004 – July 2010

Co-founded a two-person web studio with my cousin. As the sole developer, I was responsible for all technical decisions, architecture, and implementation across a range of custom web applications. I worked primarily with .NET, PHP, and Python, delivering tailored solutions across industries and managing everything from infrastructure to deployment.

## Talks & Projects

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**Sayid** – A debugger and profiler I wrote for Clojure.

- [Becoming Omniscient with Sayid](#) – Spoke at Conj 2016 in Austin. Video available on YouTube.
- <https://github.com/clojure-emacs/sayid>

**Guildsman** – A TensorFlow library for Clojure. TensorFlow is Google's machine-learning library.

- [The Tensors Must Flow](#) – Spoke at Conj 2017 in Baltimore. Video available on YouTube.
- <https://github.com/bpiel/guildsman>

## Education

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University of Delaware

September 1998 – June 2002

B.S. Computer Engineering • Minor in Computer Science