

OVERVIEW

Senior software engineer and technical leader with proven success delivering \$1M+ in business value through infrastructure optimization and standardization initiatives. I excel in backend development, cloud architecture, and cross-team collaboration while maintaining strong frontend capabilities. My experience spans the full stack engineering—from leading engineering teams at established companies like Atlassian to driving technical innovation at high-growth startups. Outside work, I maintain active open source projects and lead a technical reading group for database systems.

TECHNICAL SKILLS

Java, Haskell, TypeScript, PostgreSQL, Agile, Python, Perl, R, Linux, Bash, STAN, Kubernetes, Helm, Pulumi, TLS, TLA+, Cloud Networking, GitOp for CI/CD, DataDog, Svelte, React, AWS, GCP, Azure.

ADVANCED ACADEMIC SKILLS

Type Theory, Compilers, Formal Verification, Distributed Systems Analysis, Machine Learning, Bayesian Analysis, Linear Algebra, Differential Equations, Statistics

EXPERIENCE

Atlassian, Boston, MA • Senior Software Engineer & Acting Tech Lead 03/2024 - current

- Tech Lead for error code standardization initiative, delivering \$1M annual support cost savings.
- Led 4 person software team, responsible for systems design of bespoke automated code migration tool.
- Served as team’s subject matter expert for LLM based features
- Led feature development of feature suite for support engineers to utilize error codes for cost savings.

Starburst Data, Boston, MA • Senior Software Engineer & Tech Lead 10/2022 - 08/2023

- Tech Lead on a cloud infrastructure team, managing vendor relationships (AWS/GCP/Azure), cost reporting (Vantage), security (SOC2) compliance, and Cloudflare integration.
- Software lead for zero downtime migration for a new domain using Cloudflare Tunnels, increasing scalability by avoiding costs associated with NAT Gateways, and taking ownership of Cloudflare management of DNS and TLS features for deployment.
- TLS Certificate Re-use Project: designed and led a step by step migration to reduce deployment time by re-using TLS certificates between blue-green deployments, making deployments ~20% faster with 50% reduction in time to detection of failures.
  - Oversaw team of 3 software engineers making changes to Java codebase and GitOps scripts.

SimSpace, Boston, MA • Senior Software Engineer & Tech Lead 12/2019 - 09/2022

- Tech Lead on security observability tools for cyber ranges using TypeScript, NodeJS, Kubernetes and systems design for data pipeline.

- Built backend services for learning management systems using Haskell and PostgreSQL. Extended a >500k LOC Haskell project, added capabilities for end users, correctness tests, and load tests.
- Designed and implemented a type safe continuation token paging feature within our internal Haskell pagination library for better user experience and performance..

#### **College Vine, Cambridge, MA • Software Engineer & Data Scientist**

08/2017 - 09/2019

- Led development of machine learning and predictive algorithms used in production by thousands of end users to estimate a college applicant's chances of admission.
- Several Ad Hoc Funnel metrics: creation of a bespoke lead score model for hubspot using Bayesian feature selection and linear regression.
- Build a "decision support" app using Python and React so students could make optimal choices on which classes prepare them best for their college aspirations.

#### **Elsen, Boston, MA • Junior Software Engineer & Data Engineer**

10/2015 - 08/2017

- Created a data pipeline responsible for implementing data ingress, responsible for ingress of up to data financial data from several different sources.
- Enhanced in house programming language used for exploratory analysis of financial data, backtesting of trading strategies, and making performance was acceptable to end users.

#### **Umass Medical School, Worcester, MA • Bioinformatician**

01/2011 - 12/2014

- Conducted genomic research on the human genome, protein structure, and human computer interaction as a member of several labs, whose work directly led to five publications and contributed to several others. [Publications](#).
- Created web based interfaces used by scientists for the visualization of research results, leading to figures in prominent publications (Nature).

### **EDUCATION AND AWARDS**

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#### **Georgia Tech, Atlanta, GA • Masters in Computer Science**

Graduation Year (2021)

GPA: 3.9

#### **University of Vermont, Burlington, VT • Bachelors of Biological Science**

Graduation Year (2010)

**Knuth Check #1660**

2019

**Eagle Scout Award**

2005

### **OPEN SOURCE**

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Maintainer of two open source projects in the Haskell ecosystem, [Repline](#) and [Protolude](#).

Editor of Write Yourself a Scheme in 48 Hours, Version 2.0 — [Github](#)

Founder of Red Book Reading Group - [Discord Group](#) for weekly reading of [redbook.io](#)