
Work Experience

Senior Software Engineer *Discord Inc, ML Platform*

Jul 2022 - Jan 2024

- Proposed, designed, managed development of, and directly implemented the majority of Discord's LLM abstraction layer, enabling traceability, observability, and vendor agnosticism to all LLM usage.
- Deployed, scaled, and cut cost of serving of generative LLM features to full production traffic.
- Built a large variety of MLOps and infrastructural primitives, supporting a wide gamut of Discord's ML org goals. Partnered directly with client teams to solve hair-on-fire cross-disciplinary problems in ML.

Senior Software Engineer *Vidora Inc.*

Oct 2020 - May 2022

- Advocated for, designed, and implemented a real-time multi-armed bandit optimization system, nearly doubling top-of-funnel sales pipeline. System operating in production at 100qps at peak.
- Architected a global ML serving engine with real-time predictions served under 100ms.
- Authored a language purpose-built for client-side feature computation. Ask me about MistQL!
- Shipped uplift modeling to Vidora's modeling platform. Completed a month under estimate.
- Built a CI/CD pipeline from the ground up, unearthing dozens of critical bugs.

Software Engineer *Google, YouTube Mobile Web Core*

Dec 2018 - Jul 2020

- Bootstrapped process for safe conversion of 40k LOC JS codebase to TypeScript, using custom tooling I authored. System in use for over a year with contributions from nearly a dozen developers across multiple teams. Enabled conversion with zero production issues.
- Planned and executed the cleanup and removal of 100k LOC codebase of highly volatile, business-critical server side Python with minimal production issues.
- Rebuilt YouTube mWeb's settings page from the ground up.

Machine Learning Engineer *Procore Technologies*

Jun 2018 - Dec 2018

- Researched, implemented, and integrated experimental machine learning models for Procore's first customer-facing ML features, including content-aware image search for the construction domain.

Software Engineer, Frontend *Procore Technologies*

Mar 2016 - Jun 2018

- Acted as primary maintainer and SME for most of Procore's web-based document viewers.
- Led technical direction through major performance and UX overhauls of some of Procore's most used pages and features, saving at least \$250000 in churning contracts.
- Mentored peers across multiple product domains on practical web performance techniques.

Open Source

MistQL

*www.mistql.com***Oct 2021**

Query language for JSON-like structures. Featured in Thoughtworks' Tech Radar Vol 26

Lambda Explorer

*lambdaexplorer.com***Jun 2017**

Tutorial / REPL for the Lambda Calculus. Focus on contextual pedagogy. React + Typescript

Publications

Patent Computer System and Method for Predicting Risk Level of Punch Items**Mar 2020**

Technical Proficiencies

Languages Python, Typescript, JS, Rust, Terraform, Ruby, HTML/CSS, and others*ML* Pytorch, Tensorflow, sklearn, various serving frameworks, OpenAI, and others*Tooling* Kubernetes, GCP, AWS, React, Rails, Django, Postgres, various NoSQLs, and others

Education

B.S. Computer Engineering *University of California, Santa Barbara***2011 - 2015, Completed 2018**