

THOMAS ALEXANDER

Local Address
Brooklyn, NY 11216

Contact Info
work@fizz.buzz
+1 (650) 440-9275

SKILLS

Languages: Rust, Python, Java, Javascript, HTML/CSS, Bash
DevOps Tools: Kubernetes, Docker, Terraform, Ansible, Nix
Cloud Platforms: Google Cloud, AWS
Operating Systems: Linux, FreeBSD

PERSONAL PROJECTS

Organic: Stand-alone org-mode parser.
<https://code.fizz.buzz/talexander/organic>
Compiled to wasm as a demo: https://fizz.buzz/organic/ast_explorer/
Duster: Rust implementation of the DustJS template engine..
<https://code.fizz.buzz/talexander/duster>
Natter: Static site generator using organic and duster.
<https://code.fizz.buzz/talexander/natter>
Builds my blog: <https://fizz.buzz/>
Self-hosted kubernetes cluster: Virtual machines for kubernetes cluster built reproducibly and declaratively with nix.
https://code.fizz.buzz/talexander/machine_setup/src/branch/nix/nix/kubernetes

EMPLOYMENT



Hackensack Meridian Health, Remote

Lead Software Architect 1/2024–present

- Developed and maintained a python-based error aggregation script, automating the weekly error triage process.
- Optimized an internal Business Intelligence platform, reducing page load time from 16 seconds to under 1 second.
- Designed and implemented a distributed workflow platform for bulk LLM processing of documents.
- Tripled our caching capacity on an internal LLM-based summarizer tool without increasing costs.
- Lead the migration of python package management to poetry for reproducibility.



Harmonic.ai, Remote

DevOps / Senior Software Engineer 4/2021–2/2023

- Sole DevOps Engineer for Harmonic, responsible for the development and maintenance of our cloud infrastructure
- Transitioned Harmonic from AppEngine to Kubernetes, and introduced Terraform
- Lead cost-cutting initiatives and wrote a twice-monthly report on engineering expenditures

- Discovered a RCE (remote code execution) vulnerability in the JWT authentication plugin we were using
- Significantly improved database performance through the use of indices and statistics. Also added autoexplain and designed a fix to a database lock issue that was causing serious downtime

Stella

Stella.ai, Redwood City, CA; New York City; Remote
DevOps / Senior Software Engineer 5/2017–4/2021

- Sole DevOps Engineer for Stella, responsible for the development and maintenance of our cloud infrastructure
- Migrated our platform from Ansible and AWS to Kubernetes and Terraform on Google Cloud
- Built and secured our VPN infrastructure using Wireguard and FreeBSD
- Created a streaming log setup using Google Cloud Functions, Google Dataflow, Google Pub/Sub, and Google BigQuery
- Created CI infrastructure using Docker and Jenkins
- Created our secrets infrastructure and integrated that into our webserver using Hashicorp Vault and Python
- Also performed regular backend software engineering tasks such as implementing search endpoints, writing integrations for new Applicant Tracking Systems (Workday, Kenexa, SmartRecruiters)


tripadvisor®

TripAdvisor, Palo Alto, CA
Software Engineer II 5/2013–5/2017

- Led the transition to a new templating engine (dust.js)
- Wrote internal tools for crawling our site and detecting bugs
- Wrote internal tools for managing code reviews across multiple teams
- Maintained our Elasticsearch cluster as a member of the search team
- Implemented a rewrite of the mobile website as a member of the mobile web team
- Contributed to a Java port of the dust.js templating engine
- Wrote an internal tool for detecting dead CSS rules to improve performance



Intel, Allentown, PA
Software Development Intern 5/2011–5/2013

- Creating internal utilities to facilitate the initialization of C structures using Clang/LLVM as a parser.
- Authored internal tools and scripts to identify errors in modem logs
- Wrote a scripting language and an interpreter to create a versatile test harness

EDUCATION

B.S., Computer Science

Rensselaer Polytechnic Institute, Troy, NY