

Harry Zhu

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EDUCATION

George Fox University

Bachelor of Science in Computer Science

Graduated April 2024

Portland, OR Metro Area

PROFESSIONAL EXPERIENCE

Software Engineering Apprentice

November 2024 – Present

Recidiviz

- Modernized Python pipeline tests by migrating legacy test cases to a state-based testing pattern, improving test reliability for 590+ data ingestion scenarios and reducing test maintenance overhead by 40%
- Streamlined data access by creating a Python system to locally store and retrieve 200+ frequently used database records, eliminating repetitive BigQuery calls and SQL queries and saving the company an estimated \$10K annually in cloud costs
- Built data pipeline services in Python to standardize 212 YAML and CSV schema configurations that processes datetime fields, improving data consistency and reducing processing time from hours to minutes

Software Engineering Intern

July 2024 – September 2024

F5 Networks

- Developed backend and automation tooling using Linux-based Bash scripting to analyze 100+ CI/CD jobs, enhancing debugging efficiency for F5's core traffic management system in a Kubernetes and C infrastructure using Artifactory
- Expanded knowledge sharing by creating documentation on crash analysis procedures, supporting 30+ developers
- Accelerated crash recovery time by 10% across teams by aggregating 5+ stack traces into bug reports per day

Software Engineering Intern

August 2021 – April 2024

George Fox University Corporate Marketing Office

- Developed 20+ user tools and APIs using Vue and NodeJS, reducing development cycles by 90% as the sole developer
- Streamlined content review time by 95% through an API-driven Vue-based CMS monitoring system for 4,000+ pages
- Enhanced user experience for 1,000+ daily visitors through performance and design optimization of 100+ pages

Software Engineering Intern

June 2023 – August 2023

Liminal Insights, Inc.

- Reduced configuration time by 90% by developing a Docker-driven feature flag tool for 7+ features in React-based NextJS
- Improved battery testing reliability by building a Linux-based ZeroMQ system processing 50+ debug logs/minute
- Maintained uptime for 100+ industrial control events through Redis-driven data flow by removing race conditions

Software Engineering Intern

June 2022 – August 2022

Recidiviz

- Eliminated 200+ vulnerabilities in the product platform through automated security scanning and remediation
- Built security account automation system using REST APIs and GraphQL handling 15+ annual departures using Docker and Python frameworks, driving 95% efficiency gain in audit workflows until replacement by SOC2 solution
- Deployed 10 security controls in Google Cloud, including log monitoring via Pub/Sub, Slack alert integrations, and PagerDuty incident response scripts, reducing mean time to detection (MTTD) by 40%

PROJECTS

Context Free Grammar API in Golang | github.com/GrammarHive/backend.grammarhive.org

- Developed a text generation service, allowing users to generate and upload contextualized text by utilizing MongoDB for storage and retrieval, along with a RESTful API for interaction and Auth0 JWT authentication services
- Implemented authentication using Auth0, enhancing user experience while maintaining best practices in security

Ecological Simulation Models in C/C++ | CS 434 Parallel & Distributed Systems | Fall 2023

- Implemented a parallelized predator-prey model in C++ using POSIX threads to simulate ecological dynamics
- Extended the model using MPI for distributed memory systems in C, managing communication among 10+ nodes

SKILLS

Languages: C/C++ · Python · Java · Bash · Golang · JavaScript · TypeScript · SQL