

Harry Zhu

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EDUCATION

George Fox University

Graduated April 2024

Bachelor of Science in Computer Science (Concentration in Cybersecurity)

Newberg, OR

Coursework: Operating Systems, Database Systems, Data Networking (TCP/IP suite, FTP, HTTP, UDP)

Activities: CodePath, ACM President, 2x CTF Medalist (Top 200), College Track, Gameheads

PROFESSIONAL EXPERIENCE

Software Engineering Contractor — Recidiviz

November 2024 – Present

- Retired 200+ SQL sensitive data queries by pre-fetching metadata cache using Python on Unix systems, achieving instant lookups and boosting productivity, with projected savings exceeding \$10-15K in BigQuery costs annually
- Accelerated data standardization by 2.5x through parallel processing, transforming 200+ datetime fields across 45+ BigQuery tables, reducing processing time from hours to minutes while ensuring data consistency

Software Engineer Intern — F5 Networks, Inc.

July 2024 – September 2024

- Implemented automated debugging using Linux-based **Bash** scripting in Docker containers to analyze **100+** CI/CD jobs resulting in **70%** faster crash analysis for **45+ developers** on F5's Linux-based traffic management system
- 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 Engineer Intern — George Fox Communications Office

August 2021 – April 2024

- Engineered 20+ **NodeJS** programs using REST APIs and AJAX, reducing development cycles and time by 90%
- Streamlined content review time by 95% through an API-driven **VueJS** CMS monitoring system for 4,000+ pages
- Enhanced user experience for 1,000+ daily visitors through performance and design optimization of 100+ pages

Software Engineer Intern — Liminal Insights, Inc.

June 2023 – August 2023

- Reduced product configuration time by 90% by developing a Docker-driven feature flag tool in React for 7+ features
- 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 Engineer Intern — Recidiviz

June 2022 – August 2022

- Eliminated 200+ vulnerabilities in the product platform through automated security scanning and remediation
- Built API-driven security account automation system handling **15+** annual departures using Docker and Python frameworks, driving **95%** efficiency gain in audit workflows until replacement by enterprise 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

Ecological Simulation Models in 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
- Developed a CUDA-based GPU acceleration model, achieving faster simulation times by leveraging GPUs

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

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

SKILLS

Languages: C/C++ · Python · Java · Go · JavaScript · TypeScript · SQL · PHP

Tools: Linux · Unix · React · NodeJS · MongoDB · Docker · AWS · PostgreSQL · REST API