Harry Zhu

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Skills

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

Tools: Git · React · NodeJS · NextJS · Redis · Docker · AWS · BigQuery · PostgreSQL

Education

George Fox University Graduated April 2024

Bachelor of Science in Computer Science Newberg, OR

Coursework: Ethical Hacking, Secure Software, Data Networking (TCP/IP suite, FTP, HTTP, UDP)

Activities: freeCodeCamp x Microsoft C# Certification (September 2023), CodePath, ACM President

Professional Experience

Software Engineering Contractor — Recidiviz November 2024 – Present

- Retired 200+ SQL sensitive data queries by pre-fetching metadata cache using Python, achieving near-instant lookups and boosting developer 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 **Bash** shell scripting in Docker containers to analyze **100+** CI/CD pipelines resulting in **70%** faster crash analysis for **45+ developers** on F5's core 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 to leverage CMS workflow APIs, 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 ZeroMQ message queue 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%

Security Analyst Intern — Northwest Natural Energy, LLC May 2021 – August 2021

- Enabled real-time tracking of 1000+ daily logins through Splunk dashboard implementation for threat detection
- Reduced team search time by 5+ hours weekly through overhaul of 100+ SharePoint files and incident plans

Projects

TZ Medical ECG Medical Triage - Group Capstone Project | **github.com/HarryZ10/ecg**

- Defined requirements for a production-grade ECG triage system, delivering domain feature extraction scripts using SciPy, Scikit-Learn, and NumPy, including 34K ECG events with 95% precision in identifying anomalous data

Ecological Simulation Models | 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