

Huy Tran

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Technical Skills

Languages: Java, C, Rust, Go, Python, JavaScript, TypeScript, HTML/CSS, SQL, GraphQL
Frameworks/Libraries: React, Node.js, Express.js, Next.js, Spring Boot, Project Reactor, FastAPI
Developer Tools: Git, GitHub, BitBucket, Jira, Confluence, Docker, Amazon Web Services

Education

University of California, Berkeley

Berkeley, CA

Bachelor of Arts in Computer Science, Minor in Data Science (GPA: 4.00)

Expected May 2024

Relevant Courses: Data Structures, Computer Architecture, Discrete Math, Efficient Algorithms, Database Systems, Software Engineering, Computer Security, Operating Systems, Principles and Techniques of Data Science, Probability for Data Science

Awards and Honors: Upsilon Pi Epsilon (CS Honor Society), Jim and Donna Gray Endowment Award (High Academic Achievement)

Experience

Teaching Assistant

Berkeley, CA

UC Berkeley EECS Department

August 2023 – Current

- Provide academic support for UC Berkeley's upper division Computer Security course of over 600 students
- Instruct over 30 students weekly about applications of security concepts and attacks during section
- Produce 4+ high quality video walkthroughs regarding C vulnerabilities, cryptography, and network security
- Resolved 120+ tickets by assisting students with conceptual and debugging difficulties in Office Hours
- Collaborate with over 20 members of course staff to make administrative decisions about class direction

Backend Software Engineer

San Francisco, CA

Atlassian

May 2023 – August 2023

- Improved delivery time of Confluence WebHooks 12% by optimizing payload generation and processing
- Eliminated 140 million daily requests to Amazon RDS by removing DB dependency for sending WebHooks
- Reduced volume of WebHook messages sent to SQS by 29%, removing redundancy by batching callbacks
- Increased scope of analytics by proposing and implementing 5+ new metrics for the SignalFX Dashboard
- Raised test coverage in the Confluence Monolith by writing acceptance tests for WebHook events

Full Stack Software Engineer

Mountain View, CA

Atlassian

May 2022 – August 2022

- Leveraged reactive architecture to create a responsive and scalable notifications microservice for Confluence
- Decoupled email settings from Monolith by designing a new REST API with Spring and Project Reactor
- Reduced latency of queries by 19% by optimizing the DynamoDB schema for critical access patterns
- Modernized the email settings page by creating React components that follow the Atlassian Design System
- Integrated the notifications service with the frontend page by developing a GraphQL API with Apollo Client

Projects

PintOS

- Collaborated with a team of four to enhance a legacy x86 Operating System codebase written in C
- Implemented execution of user programs by creating process control and file system calls (e.g. fork, open)
- Improved performance by developing user-level threads and synchronization to enable multithreading
- Refined filesystem by implementing file growth and subdirectories, inspired by the Berkeley Fast Filesystem
- Halved runtime of performance tests by designing a kernel buffer cache with the Clock replacement policy

End-to-End Encrypted Filesystem

- Developed a secure filesystem that provides confidentiality and integrity of file contents written in Go
- Reduced bandwidth and asymptotic runtime of file appends by implementing files as a singly-linked list
- Facilitated secure file sharing by designing an algorithm inspired by callbacks and authenticated encryption
- Minimized security vulnerabilities by generating unique secret keys for different purposes with PBKDF2