

ERIC ZHOU

Former software engineer currently exploring roles in information security.

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EXPERIENCE

Traveling the world

2022 - Present

- I took a career break because I wasn't happy working as a software engineer. After some exploration I've realized I may be best suited to working in infosec.
- Over two years I've traveled to 30+ countries, got my AOW SCUBA diving license, summited Kilimanjaro, and sat for 10 days at a silent Vipassana meditation course. I've had to be resourceful, adaptable, persistent, and an efficient yet respectful communicator in order to survive.

Software Engineer at **Stripe**

2021 - 2022

- Worked on the Risk team to prevent risky and unauthorized transactions in the payments critical path.

Software Engineer at **Microsoft**

2019 - 2021

- Azure Frontdoor's next generation dataplane using Nginx on Linux: wrote spartan C code to be super-scale, light-weight and deterministic, designed to minimize bytes per cycle with extreme stability.
- I designed an entirely new error type and introduced it across the entire existing codebase, **reduced the service startup time by 2x** by eliminating redundant DNS resolutions, made the pool allocator and other core components of Nginx thread safe, and more.
- To reach parity in WAF with Azure Frontdoor on Windows, I wrote an HTTP multipart data parser from scratch, implemented custom rule config translation, implemented several transformation functions for our WAF evaluation engine, and more.
- In Azure Storage org, I wrote code to allow comparison of compressed rows in anchor tree data pages without first decompressing, **speeding up table lookups by 3x**.

VLSI Intern at **NVIDIA**

Summer 2018

- Ran self-heating experiments with Cadence Voltus on an unreleased 7nm graphics card.
- Showed with simulated results that self-heating effects don't significantly impact the lifetime of the chip.

Software Development Engineer Intern at **Amazon**

Summer 2017

- Developed an internal tool for Amazon Fresh enabling safe and quick updates to merchant schedules, going from a manual process that could take **over a day to just a few minutes**.

NumPyWren at **RISELab** with Professor Jonathan Ragan-Kelley

Fall 2018

- Enabled multicore machines running serverless functions to more closely approximate the efficient communication patterns of a traditional MPI cluster by caching data.
- Wrote a highly concurrent software cache in C++ that caches data from an object store like Amazon S3.

uGSI for **CS162 (Operating Systems)** at UC Berkeley

Fall 2018 - Spring 2019

- Other than typical TA responsibilities, I evaluated many student operating system design documents.
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SKILLS

Languages C • Python • C++ • Java • Go • Perl • Javascript

Side Projects I've written my own toy operating system, a web application for splitting the grocery bill with my roommates, some nifty utilities to keep myself updated with seasonal anime, and I host my own image board in a Docker container on an Azure VM.

EDUCATION

University of California, Berkeley

August 2015 - May 2019

B.S. Electrical Engineering and Computer Sciences

GPA 3.95/4

Honors Honors to Date • Dean's List • Eta Kappa Nu • Tau Beta Pi

Relevant Courses CS161 Computer Security • CS162 Operating Systems (A+) • CS262A Advanced Topics in Computer Systems • CS164 Programming Languages and Compilers • CS186 Databases • CS170 Algorithms • CS189 Machine Learning • EECS151 Digital Design and Integrated Circuits (A+)