

ERIC ZHOU

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EXPERIENCE

Industry

Software Engineer at *Microsoft*

May 2019 - Present

- Performance optimizations in the partition layer of Azure Storage, which indexes all tables in the system
- Gaining experience working with a large scale C++ development environment with a huge codebase
- Day-to-day responsibilities include thinking about race conditions, optimizing memory allocations, and identifying performance bottlenecks

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, which greatly increased the speed at which Fresh can launch in new regions
- Wrote both AngularJS frontend and the Scala backend, which interfaces with other Fresh services

Academia

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

Robot Arm with *Professor Pieter Abbeel*

Fall 2017 - Spring 2018

- Wrote drivers in C++ for devices on a microcontroller such as temperature sensor and watchdog timer
- Improved serial messaging protocol, reducing number of messages sent between microcontrollers by 2x

Undergraduate Student Instructor for *CS162 (Operating Systems)*

Fall 2018 - Spring 2019

- Other than typical TA responsibilities, I evaluated many student operating system design documents, identifying ideas that would lead to success while providing guidance for designs that needed work

Projects

Operating System

Summer 2018 - Present

- My own operating system for x86, started from scratch and written in C, created mainly for fun
- Current goal is a simple monolithic kernel with preemptive multitasking and a text user interface

Grocery Split (Web Application)

Fall 2017 - Present

- A web application built from the ground up in Go for uneven bill splitting
- Features a web UI that allows each person to individually select items that they want to pay for
- Parses digital receipts to gather data about purchases such as the price of each item

SKILLS

Languages: C++ • C • Python • Java • Go • Scala • Perl • Javascript • SQL • x86

Main Interests: Distributed systems • Operating systems • Virtualization • Containers • Networking

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: CS162 Operating Systems (A+) • CS262A Advanced Topics in Computer Systems • CS164 Programming Languages and Compilers • CS186 Databases • CS170 Algorithms • CS189 Machine Learning • CS161 Computer Security • EECS151 Digital Design and Integrated Circuits (A+) • EE140 Linear Integrated Circuits