ERIC ZHOU

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C • C++ • x86 • Perl • Python • Java • Go

EDUCATION

August 2015 - May 2019 (Expected Graduation)
University of California, Berkeley
B.S. Electrical Engineering and Computer Sciences
GPA 3.93
Awards: Honors to Date • Dean's List • Eta Kappa Nu
Relevant Courses: **CS162** (Operating Systems) • **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) • **EE140** (Linear Integrated Circuits)

EXPERIENCE

Research
NumPyWren at ***RISELab*** (*Fall 2018 - Present)* with **Assistant Professor Jonathan Ragan-Kelley**
PyWren is a massive-scale serverless computing framework that leverages the elasticity and simplicity of stateless functions such as AWS Lambda. I am working with a small team of PhD students on NumPyWren, which will allow us to take a step forward in the direction of general purpose computing in serverless environments by first implementing some of the hardest distributed linear algebra algorithms using PyWren.
Robot Arm (*Fall 2017 - Spring 2018)* with **Professor Pieter Abbeel**
I worked among a team of undergraduates and PhD students on a custom-made ultra-compliant robot arm. I wrote firmware for the microcontrollers that drive the motors as well as some of the software that controls it.

Internships
VLSI Intern at ***NVIDIA*** *(Summer 2018)*
I researched the increasing intensity of self-heating effects in the 7nm technology process and how it impacts electromigration, which is a main limiting factor in the lifetime of a chip.
Software Development Engineer Intern at ***Amazon*** *(Summer 2017)*
I developed tools for Amazon Fresh internal usage that allows for safe and quick updates to merchant schedules. One of the impacts of this is that it increases the speed at which Fresh can launch in new regions.
Software Intern at ***Rently*** *(Summer 2016)*
I created support for controlling Rently Keyless smart home devices with voice on the Amazon Echo.

Teaching
Undergraduate Student Instructor for ***CS162 (Operating Systems and Systems Programming)*** *(Fall 2018)*

PROJECTS

Operating System *(Ongoing)*
My own operating system for x86, started from scratch, created mainly for fun. My current goal is to create a simple, monolithic kernel that features preemptive multitasking, along with a barebones text user interface.

Course Projects

Pintos *(Spring 2018)*
A small instructional operating system for x86. We implemented several types of schedulers, numerous essential system calls, and a filesystem based on the BSD FFS.

CPU *(Fall 2017)*
A fully tested and functional 32-bit RISC-V CPU with a 3-stage pipeline and cache written in Verilog and pushed through the ASIC design flow with Synopsys Design and IC Compiler.