

# Billy (Yichi) Zhang

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## EDUCATION

### UNIVERSITY OF CALIFORNIA, BERKELEY

#### UNDERGRADUATE

#### B.A. IN COMPUTER SCIENCE

Aug 2017 - Present | Berkeley, CA

GPA: 3.64

Major GPA: 3.80

## PERSONAL INFO

Personal Page [zyc.moe](http://zyc.moe)  
GitHub [MCer4294967296](https://github.com/MCer4294967296)  
LinkedIn [zyc.moe/linkedin](https://www.linkedin.com/in/zyc.moe/linkedin)  
Telegram [@mcer4294967296](https://t.me/mcer4294967296)  
Wechat [zyc65535](https://www.wechat.com/p/zyc65535)

## COURSEWORK

### UNDERGRADUATE

CS 162: Operating System

CS 262a: Graduate-level OS

CS 168: The Internet

CS 268: Graduate-level Networks

CS 161: Computer Security

CS 188: Artificial Intelligence

CS 170: Algorithms

CS 186: Databases

CS 70: Discrete Math

CS 9E: Productive Use of Unix/Linux

## SKILLS

- Linux
- Python
- C/C++
- Docker
- Kubernetes
- Java
- Shell
- Javascript
- GoLang
- C#
- RISC-V
- $\text{\LaTeX}$

## AWARDS

### 99TH GLOBALLY

Google Hash Code  
2019

### SECOND PLACE

THE HACK Hackathon  
2019

## EXPERIENCE

### BERKELEY NETSYS LAB | SOFTWARE RESEARCHER

Dec 2020 - Now | Berkeley, CA | Professor Scott Shenker

- Took part in the RingWorld project, a Replicated State Machine protocol based on a ring topology.
- A core developer of the software simulator and testbench.

### FHL VIVE CENTER | SOFTWARE RESEARCHER

Aug 2020 - Dec 2020 | Berkeley, CA

- Took part in the ATLAS project, which lets people modify a mesh consisting of different pieces (planes and objects), and annotate the different parts.
- Worked closely with Qt5. Fixed bugs and led the team for a code restructure.

### ARISTA NETWORKS | SOFTWARE ENGINEERING INTERN

Jun 2020 (Rescinded due to COVID-19)

### KELDA INC. | SOFTWARE ENGINEERING INTERN

Aug 2019 - Dec 2019 | Berkeley, CA

- Worked on a Golang project that aimed to automate the process of code deployment onto a Kubernetes cluster for developers.
- Designed a system that combines log streams from multiple micro-services. Experimented different polling/interrupt strategies.

### BIGGER LAB | SOFTWARE ENGINEERING INTERN

Jun 2019 - Aug 2019 | Shanghai, China

- Designed and implemented an internal platform for easy feedback management from ~20 teachers and ~200 students annually.
- Teachers and students submit feedback via online forms; the data is captured by the platform and supervisors can later view the feedback and send to relevant recipients via Wechat.
- Worked with Flask, MongoDB, Bootstrap, Javascript and HTML.

### OPEN COMPUTING FACILITY (OCF) | VOLUNTEER ROOT STAFF

Oct 2018 - Present | Berkeley, CA

- OCF devotes to providing computing resources to Berkeley campus community.
- Migrated our free software mirrors server to a physical one with 10 GbE and doubled reliable storage. Experimented on multiple RAID configurations and maximized the performance.
- It now serves 1 PB of traffic per semester.

## PROJECTS

### TLDR Sept 2020 - Dec 2020 | Python

- Stands for *Time travel with Large-scale, Distributed event-souRced systems*.
- CS 262 class project of 3 students.
- Investigated the Ray framework for building the desired system.
- Tested multiple potential paradigms - multiple vs single actor system.
- Implemented snapshot and inherently time-travelling functionalities.
- Final report is at [zyc.moe/cs262a\\_report.pdf](https://zyc.moe/cs262a_report.pdf)

### GOMOKU.IO Jul 2020 - Aug 2020 | C++, Python, JS, WebSocket

- A website that one can visit and play gomoku with another without registering.
- Used WebSocket to maintain the connection and to send message dual-ways.
- Prototyped using Python asyncio, rewriting in C++ using Boostlib as a practice.