

# Bernard Zhao

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## LINKS

Github:// BernardZhao  
LinkedIn:// Bernard Zhao

## EDUCATION

### U.C. BERKELEY

#### BA in Computer Science

Expected May 2021

Cum. GPA: 3.81 / 4.0

Major GPA: 3.81 / 4.0

Upsilon Pi Epsilon - CS Honor

Society member

## COURSEWORK

Discrete Math and Probability  
Operating Systems, Networks  
RISC-V and CPU Architecture  
Algorithms, Data Structures  
Computer Science Pedagogy  
Circuit and Systems Design  
Unix Tools and Scripting  
Artificial Intelligence  
Computer Security  
Image Processing  
Database Design

## SKILLS

### Fluent:

- Python
- Javascript, Node
- Golang
- HTML & CSS

### Familiar:

- Java
- C
- Scheme, Lisp
- SQL, Oracle TSQL

### Frameworks & Other:

- Vue, React
- Django + REST Framework
- GraphQL, Graphene
- Jenkins, TravisCI
- Docker, Docker Compose
- Kubernetes

## EXPERIENCE

### FACEBOOK | Systems and Software Engineering Intern

June 2020 – Aug 2020 | Menlo Park, CA

- Lead development and architectural design of a new service that creates distributed MySQL replica sets on-the-fly for all custom workloads at Facebook.
- Wrote primarily asynchronous Python to avoid blocking calls, gather commands on multiple host instances in parallel, and support flexible rollback of failed steps.
- Deployed service onto Thrift RPC server to queue jobs in topics for containerized workers to drain and independently work on.
- Worked with the Raft consensus protocol to support both next generation MySQL and traditional log tailing replication during custom Flexifraft rollout.

### ZANBATO | 8VC Fellow & Software Engineering Intern

May 2019 – Aug 2019 | Mountain View, CA

- Translated broker needs into new features on the ZX digital exchange, by utilizing new React components, Redux forms, HelloSign API, and Django REST Framework serializers to calculate and manipulate the valuation and status of private securities.
- Implemented an experimental GraphQL endpoint for buy/sell order data using Graphene and Relay.
- Increased overall test coverage by 2% over pytest API, Selenium integration, and Jest Enzyme tests.

### INTEL | Software Engineering Intern

May 2019 – Aug 2019, May 2018 – Aug 2018 | Folsom, CA

- Built functionality for viewing and manipulating lab planning and test statuses in a larger org-wide web tool through Django models, endpoints, and Vue components.
- Live pages received thousands of requests per week, by 60 unique lab members.
- Developed Python scripts to automate SSD testing, scrape drive data, and a fair scheduling algorithm for test suites between varying system configurations.
- Implemented data syncing with lab dbs using SQL queries and stored procedures.

## PROJECTS (SEE MORE ON GITHUB)

### SOURCEBOUND | Clifbar Fall 2018 – Spring 2019

- Used Node and Parse to create a food recipe generation platform including user/team ACLs, ingredient and recipe versioning, and notifications.
- Worked with Clifbar client to deliver food scientists needs including nutrient data visualization and nutritional label PNG exports from a web application.

### PIXELSORT

- Designed a python script to distort detected faces in images with pixel-sorting using dlib facial recognition and Pillow, with over 300 stars on Github.

### OPEN COMPUTING FACILITY | General Manager, Spring 2018 – Present

- Built a Golang websocket application to queue music online on a local mpd server.
- Set up cluster-wide logging in Kubernetes using Fluentd to direct logs to Loki for use with existing Prometheus instance.

## ACTIVITIES

Spring 2019 - Present  
Fall 2019

Head Facilitator and Lecturer  
UGSI Reader

Linux Sysadmin Decal  
CS162 - Operating Systems