

# Briana Zhang

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## EDUCATION

### University of California, Berkeley

May 2022

Electrical Engineering and Computer Sciences (3.975/4.00)

#### Relevant Coursework

Data Structures

Efficient Algorithms and Intractable Problems

Computer Security

Probability and Random Processes

Operating Systems

Optimization Models and Applications

Computer Visions

Introduction to Machine Learning

## EXPERIENCE

### Software Engineer Intern at BigFix

Summer 2020

Web Developer for BigFix Compliance (Ruby on Rails, JavaScript/jQuery, HTML, CSS)

- » Created widget to send ajax requests for ETL import updates in real time
- » Updated UI with navigation bar and download feature for import logs

### Software Engineer Intern at Jack Henry & Associates

Summer 2019

Test Automator for Web Services (C#, LINQ, SQL, XML)

- » Created 3 major projects from scratch in C#
- » Generated hundreds of regression test cases with database validations

## TEACHING

### Incoming Discrete Math and Probability Reader

Fall 2020

### Discrete Math and Probability Reader & Academic Intern

Summer 2020

- » Taught at office hours and four discussions weekly, graded homework

### Computer Science Mentors (CSM)

Spring 2020

- » *Discrete Math and Probability Mentor*: Mentored two weekly sections

### Structure and Interpretation of Computer Programs Academic Intern

Spring 2019

- » Taught course material during weekly lab sessions and office hours

## PROJECTS

### End-to-End Encrypted File Sharing System (Golang)

Spring 2020

- » Designed and implemented secure user-file system with insecure server
- » Used salted hashed passwords, encryption, and digital signatures

### File Transmission via Sound (Python)

Fall 2019

- » Converted text file to bits transmitted with redundancy for noise resistance
- » Decoded with frequencies of highest magnitude detected by FFT

### Modified Traveling Salesman Problem Solver (Python)

Fall 2019

- » Reduced problem with Floyd Warshall for simulated annealing
- » Max of parallel simulated annealings with randomized hyperparameters

### Game: [Darkness](#) (Java)

Spring 2019

- » Memory maze game with path finding algorithm for hunting enemy
- » Pseudo randomly generated world with interactive map and characters

### Cal Hacks: RoboGSI (Java)

Fall 2018

- » Used Twilio and Firebase to search PDF lecture notes with mobile input

## ORGS

### Eta Kappa Nu (HKN) National EECS honor society

Spring 2019 - present

- » *Tutoring Officer*: Run review & tutoring sessions for lower division EECS classes
- » *Computing Services*: Developed HKN website features using Django