

# CINDY X. ZHANG

COMPUTER SCIENCE, B.A.

## EDUCATION

**University of California, Berkeley**  
2018-2022 | GPA: 3.98

Relevant Courses:

- Machine Learning
- Efficient Algorithms and Intractable Programs
- Operating Systems
- Computer Security
- Artificial Intelligence
- Computability and Complexity
- Database Systems
- Data Structures
- Machine Structures
- Discrete Math and Probability
- Principles and Techniques of Data Science
- Linear Algebra and Differential Equations

**Fall 2021:** Optimization Models in Engineering, Computational Photography

## SKILLS

### Proficient:

- Python, Java, C, Go
- React, HTML, CSS, JavaScript
- Pandas
- Technical writing, communication, git

### Intermediate:

- Java Servlet
- Datastore, MongoDB
- Django
- Docker, Kubernetes

## ACTIVITIES

### Codeology

- Computer science club that exposes members to a wide range of projects to help them find their fit in the industry
- Role: Education Officer

### Computer Science Mentors

- Student lead organization that offers mentoring to students in introductory CS courses
- Roles: Senior mentor, Tech mentor



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[cindyzhang977.github.io/cxz](https://cindyzhang977.github.io/cxz)

## EXPERIENCE

### Citadel

*June 2021 - August 2021*

SWE Intern

- Redesigned a distributed compute system that uses kubernetes nodes to execute many tasks in parallel
- Created a multithreaded queuing structure that transfers data and functions from a manager node to any number of worker nodes

### Google

*May 2020 - August 2020*

STEP Intern

- Designed, built, and deployed a web application with React frontend and Java Servlet backend that helps users explore a new city and customize a travel plan
- Integrated various Google Maps APIs to query nearby attractions, display their images, render maps with pins and directions, and autocomplete searches
- Executed 2-approximate algorithm for the Traveling Salesman Problem to optimize a route among all user-selected locations

### Triton

*November 2019 - February 2020*

SWE Intern

- Redesigned and revamped Triton's website using React and Redux
- Implemented the front end interface for customers to sign up or to request a demo, which automatically sends a slackbot notification to Triton

### UC Berkeley EECS Department

*August 2019 - Present*

Efficient Algorithms (CS 170) Staff

- Undergraduate Student Instructor (Fall 2021), Reader (Fall 2020, Spring 2021)

Data Structures (CS 61B) Staff

- Undergraduate Student Instructor (Spring 2021), Tutor (Fall 2019, Spring 2020)

### Dolby Laboratories

*May 2019 - August 2019*

Platform QA Intern

- Scripted in Python to generate output from research binaries and configuration files to verify Dolby Vision's video compression algorithm
- Integrated pytest in testing scripts to automate the process

## PROJECTS

### Minimum Dominating Network Approximation

Python

- Designed approximation algorithm with team of 3 for NP-Hard problem of finding a dominating network tree with minimized pairwise vertex distance
- Greedily constructed a minimum spanning tree and a tree whose vertices are a dominating set, used simulated annealing to improve the better solution

### Pintos - Educational Operating System

C

- Worked in a team of four to design and implement various aspects of an operating system including system calls, threading, and file structures
- Designed a priority scheduler that supports priority donation when one thread tries to acquire a lock that another thread holds
- Supported a basic file system that uses inodes to implement resizable files and directories

### Blackjack Bot

Python

- Built bots that hit/stayed according to different Blackjack strategies
- Generated data from simulated games to visualize win rates dependent on strategy and starting cards

### StackOverflow Scraper

Flask, React

- Used Beautiful Soup library to scrape Stack Overflow posts that address a question entered by the user
- Streamlined Stack Overflow search by providing a way to browse through question posts and the top answer without clicking through links