CINDY X. ZHANG

COMPUTER SCIENCE, B.A.

EDUCATION

University of California, Berkeley
2018-2022 | GPA: 3.98/4.0

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 developer

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EXPERIENCE

Citadel
June 2021 - August 2021

SWE Intern
- Designed a distributed compute system that allows the user to submit a chain of functions and a list of inputs to execute in parallel on kubernetes
- Created a multithreaded queuing structure that transfers data and functions from a manager node to any number of worker nodes that the manager would spin up and take down on demand
- Interfaced with internal object stores and MongoDB to track user resource usage and to persist large sets of data throughout the compute process

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