CINDY ZHANG

COMPUTER SCIENCE, B.A.

EDUCATION

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

Relevant Courses:
- Efficient Algorithms and Intractable Programs (CS 170)
- Artificial Intelligence (CS 188)
- Data Structures (CS 61B)
- Machine Structures (CS 61C)
- Discrete Math and Probability (CS 70)
- Linear Algebra and Differential Equations (Math 54)

Fall 2020: Operating Systems (CS 162), Database Systems (CS 186), Principles and Techniques of Data Science (Data 100)

SKILLS

Proficient:
- Python, Java, C
- React, HTML, CSS, JavaScript
- Java Servlet
- Technical writing, communication, git

Intermediate:
- Pandas
- Datastore
- Flask
- PyCATSHOO

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EXPERIENCE

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
- Saved user and trip information using Google Cloud Datastore

CUBES - Berkeley SDID
March 2020 - Present

System Design and Integration Division Researcher
- Constructed object oriented models to simulate and optimize a biologically-driven Mars exploration mission; used PyCATSHOO to model hybrid systems
- Designed and implemented a dynamic inventory to keep track of all objects in the system and their states

Triton
November 2019 - February 2020

Part-time 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 - May 2020

Data Structures (CS 61B) Tutor

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, then used simulated annealing to improve upon the better of the two solutions

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

Expense
React
- Created a budgeting web application with features such as logging transactions, managing spending limits, and setting saving goals

Pacman
Python
- Implemented reinforcement learning strategies such as q-learning and value iteration to solve Markov decision processes
- Used Bayes Nets and particle filtering to predict positions of ghosts on the board to optimize game play

AWARDS / HONORS

- Upsilon Pi Epsilon, Nu Chapter - Berkeley CS Honor Society (2020)
- UC Berkeley Kraft Award (2019)
- Cal Leadership Award (2018)