

Emily Duan

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EDUCATION

University of California, Berkeley
2023

Graduating Dec

Bachelor of Arts in Computer Science

GPA: 3.88

Relevant Coursework: Data Structures and Algorithms, Computer Architecture, Discrete Mathematics and Probability Theory, Designing Information Devices and Systems I & II

Technologies: Java, Python, C, JavaScript, SQL, HTML/CSS, RegEx, Scheme, Git, Figma

PROJECTS

Version Control System - Java

- Designed and built from scratch a version-control system with storage properties mimicking Git
- Supports: init, add, commit, rm, log, status, find, reset, branch, checkout, merge, and more

Jumping Cube Game and AI - Java

- Built a 2v2 strategy game, tracking the board state and legal moves with various data structures
- Created AI for the game by implementing the Minimax algorithm with alpha-beta pruning.

Ants vs. Bees Tower Defense - Python

- Coded a tower defense game modeled after Plants vs. Zombies
- Applied object-oriented programming paradigm by specializing varying classes of ants and bees to perform different unique functions

Scheme Interpreter - Python

- Built a comprehensive Scheme language interpreter that runs with tail recursion optimization

EXPERIENCE

Computer Science Mentors at Berkeley

Jan 2022 - Present

Mentor for CS88

- Mentor a small group of CS88 students every week: lecturing, guiding them through a problem-based worksheet and providing personalized academic support
- Devise creative teaching strategies to explain complex technical concepts in a digestible way, including OOP, recursion, python syntax, runtime analysis, scope, trees and linked lists

University of California, Berkeley EECS

Aug 2021 - Dec 2021

Academic Intern for CS61A

- Taught 40+ students weekly in lab sections for CS61A, The Structure and Interpretation of Computer Programs, helping students understand topics like data structures, SQL, and OOP
- Guided students on how to write and debug code for various coding projects

Kokodak

Mar 2019 - Mar 2020

Waitress/Cashier

- Accountable for closing the restaurant and totalling the day's earnings twice a week
- Provided excellent customer service in a fast paced environment