Emily Duan

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EDUCATION

University of California, Berkeley Graduating Dec 2023
Bachelor of Arts in Computer Science GPA: 3.88
Relevant Coursework: *Data Structures and Algorithms, Computer Security, Computer Architecture, Database Systems, Discrete Mathematics and Probability Theory, Designing Information Devices and Systems I & II*
Technologies: *Java, Python, C, JavaScript, SQL, Spring, HTML/CSS, Kotlin, Spring, Karate, RegEx, Scheme, Git, Figma, Swift, Docker*

EXPERIENCE

LegalZoom ***Jun 2022 - Aug 2022***
Software Engineering Intern
- Developed and designed a RESTful Kotlin and Spring web app that automatically filters multiple company-wide databases to populate an updated database with millions of entries used by 50+ engineers
- Contributed to team standup and retrospectives in agile development cycle

University of California, Berkeley EECS ***Aug 2022 - Present***
Tutor for CS61A
- Teach students weekly in discussion and exam prep sections for CS61A, The Structure and Interpretation of Computer Programs, helping students understand topics like data structures, SQL, and OOP
- Lead office hours throughout the week to clarify concepts and how to write and debug code for various coding projects

Academic Intern for CS61A ***Aug 2021 - Jan 2022***
- Taught 40+ students weekly in lab sections, helping students understand basics of Python and coding

Computer Science Mentors at Berkeley ***Jan 2022 - Present***
Senior Mentor for CS88
- Mentor a small group of 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
- Lead other mentors in preparation for running discussions and host teaching workshops

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