

Viviana Tran

github.com/tranviviana | tranviviana@berkeley.edu | [linkedin.com/in/viviana-tran](https://www.linkedin.com/in/viviana-tran) | <https://tranviviana.netlify.app/>

EDUCATION

University of California Berkeley

May 2026

Bachelor of Science, Electrical Engineering and Computer Science

GPA 3.86

Relevant Coursework: Programming for Engineers (MATLAB), Data Structures (Java), Structure and Interpretations of Programs (Python), Computer Architecture (C), Computer Security (GO), Intro to AI, Efficient Algorithms

CERTIFICATIONS

Sutardja Center for Entrepreneurship & Technology Certification

August 2022

- Crafted pitch for wellness app, with 5 person team, through data-collection, consulting with VC's, and applying venture fundamentals like market research, competitive analysis, and public speaking. Secured 2nd place in track.

RELEVANT EXPERIENCE

Computer Science Mentors, Berkeley, CA

May 2024 - Present

Communications Chair

- Processing and analyzing recruitment data using excel and Jupyter Notebook for 300+ written and behavioral applications increasing communication efficiency within the organization.

Cal Baptist Research on ECG Analysis, Riverside, CA

May 2024 - Present

Computer Science Researcher

- Compiling 20+ papers into literature review of common ECG analysis algorithms. Developed open-source single-threaded and multi-threaded CNN from scratch to bring accessibility to ECG analysis.
- Testing algorithm through epoch, training, and analysis across three trials of sequential and hardware-threaded CNN on randomly generated ECG signals varying in CPU load. $\sim \frac{1}{2}$ decrease in standard deviation.

Computer Science Mentors, Berkeley, CA

December 2023 - May 2024

Frontend Technology Mentor

- Designed custom coordinator UI via Figma, integrated student filtering and mass drops for 300+ members.
- Created custom student output table with TypeScript xml and CSS to showcase filtered input. Coordinating with 2 backend and 2 frontend developers, to create custom components that interact with backend databases

WORK EXPERIENCE & LEADERSHIP

UC Berkeley EECS Department, Berkeley, CA

June 2024 - Present

UCS1, Reader/Tutor

- Lead office hours covering linear algebra, statistics, and circuits. Develop software and content for 200+ students.

theCoderSchool, Berkeley, CA & Corona, CA

January 2024 - Present

CodeCoach

- Guiding 15+ students aged 7-15, to code, debug, and develop personalized games in Scratch, Python, and Java.

PROJECTS

- **Convolution of Matrices Speed Up** - *April 2024*: Created naive algorithm in C for 2D convolution and integrated SIMD, open MPI, open MP, and arithmetic shortcuts to parallelize algorithm, resulted in 9x speed-up from original algorithm.
- **CPU from Scratch** - *March 2024*: Designed 5-step data-pathway in Logisim, integrating boolean logic, multiplexers, and ROM for ALU, control logic, PC selector, and immediate generator. Sped operations by 2x with 2-stage pipeline.
- **Build Your Own World** - *November 2023*: Developed randomly generated maze board class in Java. Implemented minimum spanning tree algorithms, .txt save, and hash-map to respond to avatar movement or game replays.

SKILLS

- **Software Development** - OOP, DP, Algorithms, Data Structures, Memory Management, Parallel Programming
- **Languages/ Tools** - Java, Python, C, RISC-V, MATLAB, Scheme, SQL, JS, HTML, CSS, React, Git/Github