Viviana Tran

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EDUCATION

University of California Berkeley May 2026
Bachelor of Science, Electrical Engineering and Computer Science GPA 3.86

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

RELEVANT EXPERIENCE & LEADERSHIP

Gordon and Jill Bourns College of Engineering - Cal Baptist University May 2024 - Present
CS Researcher for ECG Analysis *Riverside, California*

- 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 sequential and hardware-threaded CNN over three trials of randomly generated signals and varying CPU loads. Significantly reduced data variability (~½ decrease in standard deviation).

UC Berkeley Computer Science Mentors May 2024 - Present
Data Analyst and Communications Chair *Berkeley, CA*

- Processing and analyzing recruitment data using Excel and Jupyter Notebook for over 300 written and behavioral applications, enhancing application turnaround time. Led collaboration with board members to optimize interview scheduling and manage backend deliberation logistics including DE&I ratio.

UC Berkeley Computer Science Mentors December 2023 - May 2024
Frontend Developer *Berkeley, CA*

- 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. Coordinated with 2 backend and 2 frontend developers to create custom components that interact with backend databases

WORK EXPERIENCE

UC Berkeley Electrical Engineering and Computer Science Department June 2024 - Present
Tutor/ Course Staff *Berkeley, CA*

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

theCoderSchool January 2024 - Present
Code Coach *Berkeley & Corona, CA*

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

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, ALU ROM, PC selector, and immediate generator. Increased operations 2x via 2-stage pipeline.
- **Build Your Own World** - *November 2023:* Developed randomly generated maze board class in Java. Implemented minimum spanning tree, .txt save, and hash-map to respond to movement or game replays.

CERTIFICATIONS

- **Entrepreneurship and Technology -** *August 2024:* Retrieved from the UC Berkeley Sutardja Center
- **React & Typescript Chrome Extension Development -** *August 2023:* Retrieved from UDEMY