Viviana Tran

github.com/tranviviana| tranviviana@berkeley.edu | 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

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

CERTIFICATIONS

Sutardja Center for Entrepreneurship & Technology Certification August 2022

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

RELEVANT EXPERIENCE

Computer Science Mentors - Communications Chair May 2024 - Present
Berkeley, California

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

Cal Baptist University - CS Researcher For ECG Analysis May 2024 - Present
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).

Computer Science Mentors, Frontend Developer December 2023 - May 2024
Berkeley, California

- 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 & 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, 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.