

Viviana Tran

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EDUCATION

University of California Berkeley

Expected Grad May 2026

Bachelor of Science, Electrical Engineering and Computer Science

GPA 3.86

Coursework: *Data Structures & Algorithms, Designing Information Devices & Systems I/II, Computer Architecture, Discrete Math & Probability, Intractable Problems, Intro to AI, Computer Security, Structure & Interpretation of Computer Programs*

SKILLS

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

RELEVANT EXPERIENCE & LEADERSHIP

CS Researcher

May 2024 - Present

Cal Baptist University Gordon and Jill Bourns College of Engineering

Riverside, California

- Develop open-source single-threaded and multi-threaded CNN from scratch in IntelliJ to increase analysis accessibility.
- Test sequential and hardware-threaded CNN over three trials of randomly generated signals and varying CPU loads on, significantly reduced data variability (~½ decrease in standard deviation).
- Compiled 20+ papers of ECG analysis algorithms and findings into a research paper accepted for WDSI 2025 conference.

Data Analyst and Communications Chair

May 2024 - Present

Computer Science Mentors (CSM)

Berkeley, CA

- Process and analyze recruitment data using Excel and Jupyter Notebook for over 300 written and behavioral applications, enhancing application turnaround time.
- Collaborate with 3 board members to optimize interview scheduling through debugging custom Google Script. Increased interview scheduling efficiency by 2x and handled loads of 200+ over the course of 3 days.

Frontend Developer

December 2023 - May 2024

Computer Science Mentors (CSM)

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

PROJECTS

File Sharing System

Oct 2024 - Nov 2024

- Designed secure, distributed file storage system in Go, with end-to-end encryption, protecting against database and revoked user adversaries; leveraging cryptography techniques, error detection, multi-device architecture, and unit testing..

Convolution of Matrices Speed Up

March 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.

Build Your Own World

Oct 2023 - Nov 2023

- Developed a randomly generated maze board class in Java seeded by user inputted number. Implemented minimum spanning tree, .txt save, and hash-map to respond to movement or game replays.

WORK EXPERIENCE

UC Berkeley Electrical Engineering and Computer Science Department

June 2024 - Present

Tutor / Course Staff

Berkeley, CA

- Lead office hours with a team of 5 other tutors for 30+ students each session. Cover topics in linear algebra, statistics, and circuits through worksheets and review sessions. Over 95% student satisfaction rate for content explanation and experience.
- Create tailored explanations for course inquiries on Edstem, using LaTeX in solutions to enhance clarity and accessibility.

CERTIFICATIONS

Certificate in Entrepreneurship and Technology, UC Berkeley Sutardja Center
React & Typescript Chrome Extension Development, UDEMY

August 2024
August 2023