

RICHARD FANG

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EDUCATION

University of California, Santa Barbara

Expected Dec 2025

Bachelor of Science, Computer Science

GPA: 3.80

- Coursework: Data Structures & Algorithms, Computer Architecture, Application Programming, Problem Solving, Software Engineering, Operating Systems, Databases, Parallel Computing, Cybersecurity, Computer Networks

EXPERIENCE

University of Osaka | ML Researcher

04/2025 - 08/2025

- Built **end-to-end generative VR pipeline** integrating **OpenAI API** and custom **ML inference** services
- Designed **multi-component distributed system** for asset retrieval, 3D scene gen, and cloud sync
- Deployed models and services on **Kubernetes clusters**, focusing on scalability and fault tolerance

ByteMelodies | Backend Engineer Intern

06/2024 - 09/2024

- Engineered **data migration pipeline** for **0.5 TB** dataset ensuring data integrity and minimal downtime
- Developed **microservices-based backend** with **Node.js** and **PostgreSQL** for supply chain company
- Implemented **server-side rendering** reducing load time by **20%**

DigiPart | Software Engineer Intern

06/2023 - 09/2023

- Created **notification system** in **Node.js/Express**, sending **500+ daily** instant transactional updates
- Leveraged **AWS (Lambda, Amazon SES/SNS)** to improve efficiency and **reduce costs by 27%**

GoodCount LLC | Software Engineer Intern

05/2022 - 09/2022

- Built web scraping program with **Python scripting** to perform market research and content analysis

PROJECTS AND EXTRACURRICULAR

SpotifAI | Code: <https://github.com/richardfang888/spotifai> Demo: <https://youtu.be/5rGKJJn6jwI>

- Built **web app** integrating **DALL-E + Spotify SDK** for ML-driven art generation and music visualization
- Designed music-synced animations with **Three.js** and utilized **asynchronous event handling** to maintain smooth real-time performance

Soccer Game Footage Machine Learning Model | Code: <https://github.com/richardfang888/analysoccer>

- Trained **machine learning model** using **Python** to analyze soccer game footage
- Implemented **computer vision** using **OpenCV** and **K-Means clustering** to detect and track players
- Designed pipelines for **real-time inference and stat aggregation**, visualized via dynamic dashboards

Video Calling App | Site: <https://voomvideo.vercel.app/> Code: <https://github.com/richardfang888/voom>

- Built **real-time video call app** (supports **5000+ concurrent users**) with **Next.js/TypeScript/Tailwind**
- Implemented user authentication, live video call, and meeting recording/playback/scheduling

Script | Code: <https://github.com/richardfang888/Script>

- Invented **lightweight coding language** written in **C++** and built compatible **lexer/parser/interpreter**

Computers For California | President and Co-Founder

- Non-profit in 10+ local schools for **refurbishing and donating used computers (500+ donated)**

SKILLS AND AWARDS

- Languages: Python, C++, Javascript, Typescript, Java, Rust, Dart, HTML, CSS, SQL
- Frameworks/Tools: React, Node, Angular, Next, Express, Pytest, Jest, Unit Test, Tailwind, Spring Boot, CUDA, Django, Flask, Redux, Git/Github, AWS, Azure, PostgreSQL, NoSQL, MongoDB, Agile/Scrum/Jira, LLMs, Linux
- Awards: President's Volunteer Service Award, Gold (2021, 2022), National Merit Scholarship Finalist (2021), Dean's Honors in Engineering (2022-2025), SAT: 1560/1600, PSAT: 1520/1520