RICHARD FANG

(949) 880-5795 | richardfang888@gmail.com

richardfang.vercel.app | github.com/richardfang888

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 | *Software 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

Scrypt | *Code: https://github.com/richardfang888/Scrypt*
- **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**