RICHARD FANG

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EDUCATION

University of California, Santa Barbara   **Expected Dec 2025**
Bachelor of Science, Computer Science   *GPA: 3.86*
- Coursework: Data Structures & Algorithms, Computer Architecture, Advanced Application Programming, Software Engineering, Operating Systems, Databases, Artificial Intelligence, Cybersecurity

EXPERIENCE

Generative VR | *Researcher*   **4/2025 - 8/2025**
- Designed and built **AI that generates VR scenes from user text prompts** (**integrates OpenAI API)**

ByteMelodies | *Backend Engineer Intern*   **6/2024 - 9/2024**
- **Engineered data migration strategies** to transfer **0.5 TB data** while preserving system functionality
- Developed **user dashboard and user management backend** for supply chain company clients
- **Implemented server-side rendering reducing load time by 20%**

DigiPart | *Software Engineer Intern*   **6/2023 - 9/2023**
- Created **notification system in Node.js/Express**, sending **500+ daily** instant transactional updates
- **Leveraged AWS tools (Lambda, Amazon SES/SNS)** to improve efficiency and **reduce costs by 27%**

GoodCount LLC | *Software Engineer Intern*   **5/2022 - 9/2022**
- Built **Python web scraping program** to perform market research and competitive content analysis

PROJECTS AND EXTRACURRICULAR

SpotifAI | *Code: https://github.com/richardfang888/spotifai   Demo: https://youtu.be/5rGKJJn6jwI*
- Built **web app that implements DALLE API** to generate art from spotify music
- Designed **music-synced animations with Three.js** and listener population map using geolocation API
- Integrated **Youtube API** to link and play music video for currently playing song on spotify

Soccer Game Footage Machine Learning Model | *Code: https://github.com/richardfang888/analysoccer*
- **Created machine learning model using Python** to track and detect player/ball movement in games
- Implemented **K-Means clustering** to predict player teams/positions
- **Generated dynamically updating soccer game statistics** using OpenCV

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**
- Supports data types, functions, conditional logic, math/bitwise operations, loops, recursion, input/output

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, Dart, HTML, CSS, SQL**
- **Frameworks/Tools:** React, Node.js, Angular, Next.js, Express.js, Jest, Tailwind, Bootstrap, Spring Boot, Django, Flask, Flutter, React Native, Redux, Git, Github, AWS, PostgreSQL, OpenAI, Docker, Linux, Figma, Lucidchart
- **Awards: President's Volunteer Service Award, Gold** (*2021, 2022*), **National Merit Scholarship Finalist** (*2021*), **Dean's Honors in Engineering** (*2022-2025*)