

RICHARD FANG

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EDUCATION

University of California, Santa Barbara
Bachelor of Science, Computer Science

Expected June 2025
GPA: 3.86

- Relevant Coursework: Data Structures and Algorithms I & II, Computer Architecture, Advanced Application Programming, Operating Systems, Databases, Artificial Intelligence, Machine Learning

SKILLS

- General Skills:** Backend, Frontend, Full Stack, OOP, Agile, Unit Testing, Integration Testing, End-To-End Testing, REST APIs, Version Control, System Design, Mobile Development
- Languages:** Python, C++, Javascript, Typescript, Java, Dart, HTML, CSS, SQL
- Frameworks:** React, Node.js, Angular, Next.js, Express.js, Jest, Tailwind CSS, Redux, Bootstrap, Spring Boot, Django, Flutter, React Native
- Other Tools:** Git, Github, AWS, PostgreSQL, OpenAI, OpenCV, Docker, Linux, Figma, Maven

WORK EXPERIENCE

ByteMelodies | Software Engineer Intern

6/2024 - Present

- Built dynamic **full stack** user dashboard, **200+** users including top **international shipping companies**
- Authentication** and **user management** with **AWS Cognito**, **React** frontend, **API Gateway** and **PostgreSQL** backend

DigiPart | Software Engineer Intern

6/2023 - 9/2023

- Built email and push **notification platform** in **NodeJS** to send **5000+** marketing emails and instant updates regarding order and payment information
- Leveraged AWS tools (**Lambda**, **DynamoDB**, **API Gateway**) to improve efficiency of **Java** billing service and reduce operational costs by **25%**

GoodCount LLC | Software Engineer Intern

5/2022 - 9/2022

- Built **Python web scraping** program to perform market research and competitive **content analysis**
- Built **analytics platform** with **MERN stack** to calculate performance metrics and generate reports

PROJECTS AND EXTRACURRICULAR

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

- Secure **real-time video calling** app with responsive design using **Next.js**, **TypeScript**, **Tailwind CSS**
- Features include online video meetings, past meeting information and recordings, future meeting scheduling, advanced video, audio, and admin controls

Soccer Game Footage Analyzer | Code: <https://github.com/richardfang888/analysoccer>

- Object detection and tracking with custom **machine learning model** using **YOLOv8**
- K-Means** clustering for team assignment by color, **OpenCV** for frame-by-frame data analysis to generate live possession and player movement statistics

Spotify AI Dashboard | Demo: <https://youtu.be/5rGKJJn6jwI>

- Feature rich dashboard **web app** expanding on Spotify listening experience
- DALLE** generated cover art, **Three.js** music animations, **Spotify API** integration, **Youtube API** for MVs

Grocery Delivery App | Code: <https://github.com/richardfang888/communitypantry2>

- Developed and maintained a **full-stack application** (**Django**, **PostgreSQL**, **JavaScript**) to provide a community grocery delivery service during the COVID-19 pandemic
- Built **API** and compiled data on stores and inventory using **real-time location geodata** from Overpass

Computers For California | *President and Co-Founder*

- **Non-profit** organization with branches in 10 local schools aiming to extend the reach of technology
- Organized computer drives and **donated 500+ computers** to communities in need

Boxing Simulation Game | *Hackathon Submission and Demo: <https://devpost.com/software/boxing-simulator>*

- Web-based boxing simulation game with Python **OpenCV** to capture real-time player movement via webcam and Google **MediaPipe** ML feature detectors to isolate motion and make calculations
- Rendered real world positional data into a customized interactive **3D game engine** in **BabylonJS**

AWARDS

- **President's Volunteer Service Award, Gold** | 2021, 2022
- **National Merit Scholarship Finalist** | 2021
- **Dean's Honors in Engineering** | 2022-2024