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 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, Code Review, 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, Bootstrap, Spring Boot, Django, Flutter, React Native, Redux
- **Other Tools:** Git, Github, AWS, PostgreSQL, OpenAI, OpenCV, Docker, Linux, Figma

WORK EXPERIENCE

ByteMelodies | *Software Engineer Intern*   **6/2024 - Present**
- Primarily worked on development of the **backend** user dashboard and **user management** for top shipping and supply chain company clients
- Contributed to development of the microservices architecture and worked with frontend team to **reduce load time by 20%** through optimizing server-side rendering
- Collaborated with databases team through process of scaling databases and migrating **0.5 TB** of data

DigiPart | *Software Engineer Intern*   **6/2023 - 9/2023**
- Worked in team of 5 to build an email and push **notification system** in **NodeJS** with **Express** to send **500+ daily** marketing emails and instant updates regarding order and payment information
- Leveraged AWS tools (**Lambda**, **Amazon SES/SNS**) to improve efficiency of service and reduce operational costs by over **25%**

GoodCount LLC | *Software Engineer Intern*   **5/2022 - 9/2022**
- Built **Python web scraping** program to perform market research and competitive **content analysis**
- Generated performance metrics and reports from website and database activity using **JavaScript**

PROJECTS AND EXTRACURRICULAR

Video Calling App | *Site: https://voomvideo.vercel.app/ Code: https://github.com/richardfang888/voom*
- Secure **real-time video calling app** (supports over 5000 concurrent users) with responsive design using **Next.js**, **TypeScript**, **Tailwind CSS**
- Includes user authentication, online video meetings, past meeting recordings, future meeting scheduling, and advanced video, audio, and admin controls

Soccer Game Footage Analyzer | *Code: https://github.com/richardfang888/analysoccer*
- **Object detection** and **tracking** from soccer footage via custom **machine learning model** and **Python**
- Assign players to teams using **K-Means clustering**
- Generate live dynamic possession and player movement statistics using **OpenCV** and data analysis

Spotify AI Dashboard | *Code: https://github.com/richardfang888/spotifai   Demo: https://youtu.be/5rGKJJn6jwl*
- Feature rich dashboard **web app** that expands on Spotify listening experience
- Generates cover art with **DALLE**, creates custom music-synced animations with **Three.js**, and retrieves lyrics and music video for playing song using open source APIs

Scrypt | *Code: https://github.com/richardfang888/Scrypt*
- Lightweight **coding language** written in **C++** which supports basic data types, arrays, functions, if/else statements, loops, standard math and bit logic operations, and standard input and output
- Built compatible **lexer**, **parser**, and **interpreter**

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

AWARDS

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