Vihan Raj

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EDUCATION:

University of Southern California   **Los Angeles, CA**
Viterbi School of Engineering | Bachelor of Science: Computer Science   May 2024
- Academic Honors: Viterbi Dean's Honor List
- Relevant Coursework: Data Structures (C++), Software Development (Java, JavaScript, SQL, HTML, CSS), Full Stack Web Development (JS, SQL, HTML, CSS, Bootstrap), Software Engineering (Java, Android), Intro to Internetworking (C++), Intro to Computer Systems (C), Video Game Programming (C++), Intro to Artificial Intelligence (Python), Cross Platform App Development (Flutter), Intro to Embedded Systems

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WORK EXPERIENCE:

Productiv Inc.   **Palo Alto, CA**
Software Engineer Intern – Full Stack   May 2023 – August 2023
Relevant technology: Node.js, Vue.js, JavaScript, AWS, Confluence, Jira, Git, TypeScript, Jest, Cypress, RESTful API
- Added contract data corruption detection and change limiting to ensure data security for 90+ customers
- Created new UI components, developed SCIM endpoints, and extended existing user permissions structures to allow for customizable permissions management in product and with Okta.

Haven   **Los Angeles, CA**
Full Stack Engineer   January 2023 – April 2023
Relevant technology: Next.js, Tailwind CSS, Supabase, Git, PostgreSQL
- Founded a startup with three other USC students aimed at simplifying design and supply process for home renovations. Winner of USC TroyLabs DEMO 2023 pitch competition with a prize of $4500

Productiv Inc.   **Palo Alto, CA**
Software Engineer Intern – Full Stack   June 2022 – December 2022
Relevant technology: Node.js, Vue.js, JavaScript, AWS, Confluence, Jira, Git, Jest, Cypress, RESTful API
- Developed a new integration with Fyle to pull in and parse expenses leveraging REST APIs and OAuth2. Standardized expense structure and usage for hundreds of thousands of expenses
- Implemented contract data change detection and validation alerting deployed to 100+ customers

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PROJECTS:

Raspberry PI Audio Hub (C++, Python)
- Built and coded a device using a raspberry pi to act as a music routing hub between Spotify connect, Bluetooth, and an analog input from a vinyl player.

Portal (C++, SDL)
- Simplified remake of the popular game developed by Valve. Features five levels with a custom physics engine.

MotionMuse (Next.js, Tailwind CSS, TensorFlow)
- Built a web-app with two teammates during the LA Hacks hackathon to provide dance and motion teaching using TensorFlow pose estimation.

COMMUNITY PARTICIPATION:

USC Racing   **Los Angeles, CA**
Electronics Team Member   September 2021 – December 2022
- Implementation of a new dashboard, live telemetry, and a newly designed Power Distribution Module (PDM).
- Primarily responsible for writing the software on the Teensy for the PDM, a controller which determines the distribution of power to the car's peripherals based on sensor measurements.

USC Theta Tau   **Los Angeles, CA**
Member | Social Chair   November 2021 – Present | May 2022 – December 2022, May 2023 - Present
- Theta Tau is the nation's oldest and largest professional engineering society, aimed at the development of its members through the pillars of service, professionalism, and brotherhood.

SKILLS + INTERESTS

Languages & Software: C++, Java, JavaScript, Python, TypeScript, Vue.js, Vuex, AWS, Node.js, Git, Docker, Postman, Tailwind CSS, Next.js, HTML, CSS, Jira, Confluence, React, Jest, Cypress, PostgreSQL, RESTful API,
Other Skills & Interests: Hindi, Bangla, Saxophone, Piano, Music history, Volleyball, Cricket, Cryptocurrency