Aryan Sahni

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EDUCATION

B.S Computer Science, University of California, Santa Cruz (2022 - 2026)

- **GPA: 3.92/4.00**
- **Honors:** Dean's Honors List (Fall 2022, Winter 2023, Spring 2023, Winter 2024, Spring 2024, Fall 2024)
- **Coursework:** Data Structures & Algorithms, Web Development, Computer Architecture, Computer Systems, Mathematics

SKILLS

- **Programming Languages:** Python, JavaScript, HTML/CSS, C/C++
- **Frameworks and Libraries:** React, Node.js, Bootstrap, Tailwind, OpenCV, Mediapipe
- **Tools and Software:** Git, Linux/Unix, Vim, MySQL, Valgrind
- **Soft Skills:** Analytical Debugging, Team Collaboration, Communication, Quick Responsiveness, Creative Thinking

WORK EXPERIENCE

Ruca Naturals - Remote **Jul 2024 – Sep 2024**

Software Engineering Intern

- Redesigned the e-commerce platform using HTML5/CSS3, boosting web traffic by 40% and user engagement by 25%.
- Leveraged Shopify to integrate 3 new payment gateways, cutting cart abandonment from 40% to 25% and raising conversion rates by 15% in three months.
- Implemented SEO strategies that increased monthly visitors by 30%, elevating organic search rankings through targeted keyword optimization.

Pollsights - Remote **Jul 2023 – Sep 2023**

Software Engineering Intern

- Created a React-based voting interface with confetti effects, lifting daily poll participation by 35% and returning-user rate by 20%.
- Engineered frontend-backend synchronization via RESTful APIs, reducing vote submission errors from 10% to 2% and updating results in real time.
- Optimized page load times from 3.2s to 1.5s through refined JavaScript and React code, driving a 40% jump in user satisfaction during high-traffic periods.

PROJECTS

Daily DSA: ***A Next.js-Based Data Structures & Algorithms Platform***

- Built a Next.js DSA platform with SSR, Tailwind, and MUI, cutting load times by 25%, designed for 100+ concurrent users.
- Developed interactive, paginated listings for 150+ DSA questions using MUI Tables and category-based routing, increasing navigation efficiency by 40%.
- Architected a modular solution that cut maintenance overhead by 30% and standardized styling across 8 components.
- Enabled daily engagement via automated prompts, completion checkboxes, and structured problem sets, raising average session length by 20%.

Interactive Digital Portfolio: JavaScript

- Engineered a fully responsive personal website using Next.js and React-Bootstrap, featuring a dynamic projects page, an animated hero section with a blur-overlay background, and a custom navigation system for an intuitive user experience.
- Integrated EmailJS for seamless form submissions and implemented continuous deployment via Vercel, ensuring rapid updates and a professional, production-ready web presence.

Real-Time Facial Detection System Using OpenCV : ***Python***

- Built a Haar Cascade–based face recognition system with 95% accuracy and a 50ms response time on images and live video.
- Optimized image preprocessing and tuning parameters to trim latency by 30%, sustaining performance under changing lighting conditions.
- Enhanced user flow with bounding boxes, highlighting detected faces in real time for instant feedback.

Hand Gesture Music Control : ***Python***

- Engineered a computer vision–driven music control system, achieving 95% gesture accuracy and sub-200ms response times.
- Enabled real-time commands (pause/play) and cut track-switch latency from 1.2s to 850ms with open/closed-hand gestures.
- Facilitated intuitive track switching using thumb gestures for left and right navigation.
- Integrated OpenCV, Mediapipe, and Osascript to unify computer vision, hand tracking, and macOS scripting, creating a responsive user experience.