Aryan Vora

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EDUCATION

University of California, Santa Cruz   Santa Cruz, CA
Bachelor of Science in Computer Science, College Scholars Program   *Expected Graduation: June 2025*

EXPERIENCE

Research Assistant   Jun. 2024 – Aug. 2024
Computer Vision Lab @ National Taiwan University   *Taipei, Taiwan*
- Contributed to the development of a real-time hand tracking and gesture recognition system for AR smart glasses, integrating Time-of-Flight sensors with Mediapipe for precise 3D hand reconstruction and interaction.
- Optimized the logic to simultaneously handle TOF depth calculations and hand landmark tracking, resulting in a 60% increase in FPS (15 to 24 FPS), significantly enhancing responsiveness and performance.
- Created visualization tools for hand tracking and depth data, allowing real-time monitoring and debugging of the system, which facilitated further optimizations and refinements.

Software Engineering Intern   Aug. 2023 – Nov. 2023
Squeezee Group Shopping   *Remote*
- Developed a cross-platform receipt scanning application with React for the frontend and Firebase for the backend, enabling seamless user experience across multiple devices.
- Integrated OCRSpace for accurate text and data extraction from scanned receipts, utilizing AI-driven techniques to enhance OCR accuracy and reliability.
- Designed and implemented a robust price-comparison API using web scraping techniques, enabling real-time data retrieval from multiple e-commerce platforms, and deployed a website using Flask to showcase the API's capabilities.

PROJECTS

Emulator | C++
- Worked in a team of four to develop an emulator with a modular architecture consisting of Console, Memory, CPU, and GPU components, utilizing SDL for graphics rendering and input handling.
- Implemented a GUI launcher, video recording, input recording/playback, and a debugger with breakpoints and stepping.

HTTP Server | C
- Developed a multithreaded HTTP server from scratch in C, utilizing asynchronous I/O to handle concurrent connections with minimal latency.
- Developed robust input validation mechanisms to handle all input possibilities, including malicious data, ensuring stability and preventing server crashes.

Pokernow Assistant | JavaScript, HTML/CSS
- Developed a Chrome extension, available on the Chrome Web Store with many active users, that performs real-time data scraping from PokerNow sessions to calculate win rates and deliver statistical insights directly within the game interface.
- Implemented a user-friendly interface that integrates seamlessly with PokerNow, allowing users to access in-depth analytics and make informed decisions during gameplay.

TECHNICAL SKILLS AND AWARDS

Languages: Python, C/C++, JavaScript, Java, HTML/CSS
Frameworks: React, Node.js, Flutter, Flask, Nextjs, RestAPI
Developer Tools: Git, Bash, AWS, Firebase/Google Cloud, Postman, Figma, Mobile and Web Development, Image Detection, OpenCV, Pandas