

Erik Chao

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EDUCATION

University of California - Santa Cruz

Santa Cruz, CA

Bachelor of Science: Computer Science

June 2025

- GPA: 3.66
- Relevant Coursework: Computer Graphics, Artificial Intelligence, Computer Networks
- Dean's List: Spring 2022

EXPERIENCE

VR Research Assistant

March 2025 - Current

SET Lab / UC Santa Cruz

Santa Cruz, CA

- Optimized VR data visualization performance by 85% by restructuring data intake from JSON to CSV.
- Designed a real-time spatial tracking UI (sliding modal) to visualize live telemetry and user positioning in an immersive Three.js environment.
- Collaborated with undergraduates and graduate researchers to prepare findings for publications.

Artificial Intelligence Tutor

September 2024 – December 2024

CSE 140 - Artificial Intelligence / UC Santa Cruz

Santa Cruz, CA

- Utilized UC Berkeley's Pac-Man AI project to support students in learning key AI concepts.
- Hosted online office hours to provide students with additional support outside of class, averaging 15-20 students per week.
- Guided students through programming assignments and weekly quizzes while also providing debugging support for students.

PROJECTS

SlugCruise | *React.js*

January 2026

- Developed a full-stack ride-sharing platform to facilitate transportation for the UCSC student community.
- Integrated Google Maps JavaScript API to route drivers to a specified meeting point to pick up passengers and to reach their destination.
- Optimized cross-platform performance by implementing a responsive design across mobile and desktop browsers.

Pac-Man AI Search Agent | *Python*

May 2024 – June 2024

- Collaborated with developers to build a dynamic search agent for a capture-the-flag game.
- Implemented a hybrid approach using reinforcement learning and reflex-based strategies, enabling agents to switch between "defensive" and "offensive" states dynamically.
- Developed an optimized state-switching script that adjusted agent behavior based on team and opponent scores, improving efficiency by 30% and increasing the win rate.

Multithreaded HTTP Server | *C, Pthread*

November 2023 – December 2023

- Developed a thread-safe application to handle multiple concurrent HTTP requests using the POSIX thread library for efficient request processing.
- Implemented a file-locking system to ensure atomic operations and prevent thread overlap during concurrent execution, leading into an increase of 20% efficiency when dealing with numerous requests concurrently.

TECHNICAL SKILLS

Languages: C, C++, Python, JavaScript, SQL, Haskell

Developer Tools: Unix, Git, npm

Libraries: React, Three.js, Pandas

Applications: Adobe Lightroom, Adobe Premiere, Mailchimp