Ethan Makishima

emakishi@ucsc.edu ♦ (650) 495-2985 ♦ linkedin.com/in/ethan-makishima-635b4a1ab
♦https://github.com/ethan10mak

TECHNICAL SKILLS

- **Languages:** Python, C++, Java, C, JavaScript, SQL, Swift/SwiftUI, Scenic
- **Frameworks & Tools:** React, Xcode, Firebase, MongoDB, Docker, GitHub, Atlassian, PyTest
- **Skills:** Unit Testing, Sprint Planning, Clean Coding, AI Workflow, Documentation, CI/CD, UI/UX, System Desgin, Architecture

EXPERIENCE

University of California, Santa Cruz, Santa Cruz, CA
Software Research Assistant, Mar 2025 – Current

- Architected and implemented a **3D mesh generation extension in Python** for the Scenic probabilistic programming language, enhancing autonomous vehicle simulation environments with a CI/CD workflow.
- Designed **data parsing systems and algorithms** for elevation profiles, improving the architectural integrity and simulation realism.
- Streamlined Scenic-to-backend pipelines**, reducing scenario generation complexity** for AV testing workflows.
- **Utilized automated unit and integration tests using PyTest**, ensuring reliability and correctness of simulation components in research-driven workflows.

University of California, Santa Cruz, Santa Cruz, CA
Teaching Assistant, Mar 2025 – Jun 2025

- Led weekly discussion sections and office hours for a **250+ student upper-division theory** course.
- Supported course delivery by connecting formal models with real-world applications.

Aikitech, Inc., Scottsdale, AZ
Software Engineer Intern, Aug 2024 – Sept 2024

- Prototyped **LLM-powered applications** to optimize client-facing solutions.
- Designed & deployed a **cloud database, MongoDB, with 50+ schemas** supporting internal tools.
- Collaborated in Agile sprints and contributed to **system design discussions**, ensuring alignment of architecture with cross-functional requirements.
- Performed competitive product analysis, providing data-driven insights to guide strategy.

ACADEMIC PROJECTS

Exploring and Improving Drone LLMs, CSE233, 2025 – Mar 2025

- Improved resilience of drone LLMs against perception attacks by **26%** through chain-of-thought prompting and historical context.
- Dedicated **15+ hrs/week** to developing algorithms, coding experiments, and running evaluations in a research-driven environment.

ServiceXChange App, CSE115, Jan 2023 – Apr 2023

- Built a **full-stack mobile app** in Swift/SwiftUI + Firebase enabling local service trading.
- Implemented **real-time sync, authentication, and UI/UX design** in a 5-member Agile team.
- Contributed **10+ hrs/week** to coding, testing, and design, ensuring timely delivery of a working prototype.

EDUCATION

University of California Santa Cruz, Santa Cruz, CA
Masters of Science in Computer Science **& Engineering, GPA:** 3.5/4.0**,** Sept 2024 – Dec 2025
Bachelor of Science in Computer Science, **GPA:** 3.53/4.0, **Dean's List:** 3 Quarters , Sept 2020 – Jun 2024

Relevant Coursework: Advanced Security, Formal Methods, Artificial Intelligence, Computer Architecture, Intro to Databases, Data Structures & Algorithms

LEADERSHIP & ACTIVITIES

Division III Men's Volleyball Team, UC Santa Cruz, Sept 2020 – April 2025

- **Team Captain** (2 years): Led practices, bonding, and study sessions, contributing to **Team AVCA Academic Awards** (2024, 2025).
- Managed 40+ hrs/week of training, travel, and competition alongside full-time coursework.

Student Athlete Advisory Committee (SAAC), September 2023 – June 2025

- Executive Board Member coordinating community engagement events and campus-wide initiatives.