

# Kevin Davidson

[kevin@kevindavidson.work](mailto:kevin@kevindavidson.work) | [LinkedIn](#) | [GitHub](#) | [Website](#) | [Hugging Face](#)

## EDUCATION

**Santa Monica College | Santa Monica, CA | Candidate for A.S.-T in Mathematics (Transferring Fall 2026)**  
**GPA: 3.83/4.0 / Honors Program Member**

**Jun. 2026**

## TECHNICAL SKILLS

**Languages:** C++17, Python (AI/ML), JavaScript (React), Bash

**Developer Tools:** YOLOv8, Hailo-8L NPU, Linux (Debian/Ubuntu), Edge Computing, PyTorch (Model Training)

**Software and Frameworks:** React.js, Git/GitHub Actions, Vercel

**Web & Design:** Figma, Framer, Adobe Creative Suite (Illustrator, Photoshop), CAD

## PROFESSIONAL EXPERIENCE

### Santa Monica College | Santa Monica, CA

**Sep. 2025 - Dec. 2025**

*Supplemental Instruction Leader/ Teaching Assistant*

- **Directed peer-to-peer instruction for a 120-student Data Structures (C++) course**, focusing on complex memory management, pointers, and OOP paradigms.
- **Debugged 50+ student C++ programs weekly** using VS Code, resolving critical logic errors, memory leaks, and segmentation faults.
- Integrated **CI/CD workflows** into the student curriculum, teaching **GitHub Actions** for automated testing to reduce submission errors and enforce industry standards.

## RESEARCH & PROJECTS

### TALOS : Open-Source Bicycle Safety System | *Python, C++, YOLOv8, Hailo-8L*

- Achieved **26x inference speedup (3 to 80+ FPS)** by migrating the vision pipeline to a **Hailo-8L NPU**, enabling real-time blind-spot monitoring on a Raspberry Pi 5.
- Increased motorcycle class recall by **41%** by fine-tuning YOLOv8 on a custom dataset with class oversampling and published versioned models to Hugging Face.
- Built a **threat-isolation algorithm** based on **Tau Theory (Time-to-Collision)** to filter background noise and calculate time-to-collision, **reducing false-positive alerts on stationary vehicles** for high-speed transit safety.

### Apollo: Full-Stack Campus Resource Engine | *React.js, Python, Vercel*

- Streamlined campus navigation and study-room discovery by architecting a **live interactive SVG map** in React.js that visualizes real-time room occupancy for **50+ students weekly** at [apollo.kevindavidson.work](http://apollo.kevindavidson.work).
- Engineered a **Python ETL pipeline** to scrape and sanitize unstructured Oracle APEX schedules, converting **250+ daily records** into optimized JSON for sub-second client-side rendering.
- Maximized resource utility through a **predictive simulation**, allowing users to forecast room availability and book study spaces during peak hours to improve building efficiency.

## LEADERSHIP EXPERIENCE

### HackCC | Regional Organization

**Jan. 2026 - Present**

*Organizer*

- Directed logistics for a regional hackathon with **250+ projected participants**, working alongside a 35-person committee to secure funding from university grants and corporate sponsors.
- Coordinating with student organizations to drive recruitment and technical mentorship opportunities.

### Future in Tech at SMC | Santa Monica, CA

**Aug. 2025 - Present**

*Co-Founder and Vice President*

- Co-founded a student tech community, scaling membership to **80+ active peers** and organizing **weekly technical workshops** on AI, Cloud, and Resume development.

### Obscura Design | Los Angeles, CA

**Oct. 2020 - Present**

*Freelance Product Designer*

- Operated as a **UI/UX Consultant** for **30+ B2B clients**, securing **recurring contracts with 5+ core partners** by delivering high-fidelity Figma assets that minimized revision cycles.