

Kevin Davidson

(310) 633-1932 | kdavidson639@gmail.com | [LinkedIn](#) | [GitHub](#) | [Website](#) | [Hugging Face](#)

EDUCATION

Santa Monica College | Santa Monica, CA

June 2026

AS-T in Mathematics, Pursuing transfer to a 4-year institution for Applied Mathematics / GPA: 3.83/4.0

- **Courses:** Data Structures in C++, C++ Programming, C Programming, Java Programming, Calculus 1-3, Differential Equations, Linear Algebra
- **Honors:** Dean's List

TECHNICAL SKILLS

Languages (ordered by proficiency): C++, Python, C, Java, HTML

Tools and Frameworks: Hugging Face, Git/Github, Linux (SSH), Adobe Photoshop and Illustrator, Microsoft Excel, Microsoft Office Suite, Google Workspace, Figma, Framer, CAD

Libraries: PyTorch, NumPy, OpenCV

RELEVANT EXPERIENCE

Santa Monica College | Santa Monica, CA

Sep. 2025 - Dec. 2025

Supplemental Instruction Leader

- Selected to lead peer-to-peer instruction for a **100+** person Data Structures (C++) course.
- Host 2x weekly office hours to debug **C++** code and teach complex topics (e.g., pointers, recursion, OOP).
- Manage an online support forum and collaborate with the professor to ensure content alignment.

Obscura Design | Los Angeles, CA

Oct. 2020 - Present

Founder and Lead Graphic Designer

- Designed the complete user interface (**UI**) wireframe and final mock-up for a B2B SaaS company's website.
- Created and delivered digital marketing assets, product packaging, and visual ads for freelance clients.
- Commissioned for **over 30** unique poster designs, managing client communication from concept to final delivery.

RESEARCH & PROJECTS

TALOS: Computer Vision Bicycle Safety System | Personal Project

- Developed "TALOS," an open-source bicycle safety system on a headless Raspberry Pi 5, integrating a custom YOLOv8 pipeline on a **Hailo-8L NPU (13 TOPS)** to accelerate inference from **3 FPS to 80+ FPS** for real-time safety.
- Engineered a custom dataset by implementing class merging and oversampling techniques, fine-tuning YOLOv8n to increase minority-class (motorcycle) recall by **41%** and publishing versioned models to Hugging Face.
- Implemented **Tau theory (optical expansion)** and Euclidean centroid tracking to calculate **Time-to-Collision (TTC)**, distinguishing actual threats from static background objects.

Tic-Tac-Toe v2 | Personal Project

- Implemented a Minimax algorithm decision engine with recursive depth-first search to compute optimal game states, mathematically guaranteeing non-losing outcomes.

Movie Player | Personal Project

- Architected a C++ movie player that loads ASCII frames into a custom-written doubly linked list to handle dynamic memory allocation.
- Implemented an efficient traversal mechanism ($O(n)$) to play movies forwards/backwards and delete/copy frames.

LEADERSHIP EXPERIENCE

Future in Tech at SMC | Santa Monica, CA

Aug. 2025 - Present

Co-Vice President

- Co-manage club operations, helping organize technical workshops and industry guest speaker events.