

Emmanuel Hernandez

eahernandez1@ucla.edu | 949-910-8604 | [linkedin.com/in/05manny](https://www.linkedin.com/in/05manny) | github.com/EmmanuelH05

EDUCATION

University of California, Los Angeles

Los Angeles, CA

B.A. Computer Science & Linguistics

Expected Graduation: June 2028

- **Relevant Coursework:** Data Structures & Algorithms, Algorithms & Complexity (in progress), Operating Systems, Computer Organization, Database Systems, Programming Languages, Software Construction & Tools, Computational Linguistics (in progress), Discrete Mathematics, Linear Algebra, Probability & Statistics, Multivariable Calculus

TECHNICAL SKILLS

Languages: C/C++, Python, Java, JavaScript, TypeScript, SQL, Rust

Frontend: React, React Native, Next.js, Expo, Tailwind CSS, HTML/CSS

Backend: Node.js, Express, REST APIs, Firebase, Firestore, PostgreSQL, Prisma, Supabase, MongoDB, JWT auth

Tools: Git, Linux/Unix, Docker, AWS (S3), CI/CD, Vercel, Render, Google Apps Script, pytest

Agentic: Claude Code, MCP servers, custom subagents & skills, Ollama, LM Studio, Gemini API, LLM eval harnesses

WORK EXPERIENCE

Software Engineer Intern

June 2026 – Aug 2026

Rise the Fenua

Los Angeles, CA

- Architected a dashboard (Next.js, TypeScript, Supabase) that streamlined merchandise fulfillment for 20+ volunteers
- Engineered a data pipeline with 6+ SQL migrations to normalize Google Form responses, cutting manual processing by 40%
- Directed operations spanning software, merchandise logistics and fundraising, raising \$25,000 in donations
- Automated inventory and donation tracking in Google Apps Script, eliminating manual shipment record-keeping

Software Engineer Intern

Dec 2025 – June 2026

We Explore Earth

Los Angeles, CA

- Delivered features for a real-time event app built for 20,000+ users on a 15-member cross-functional team with 5 designers
- Drove the events page and RSVP flow from 0 to 1 across 11 merged PRs, from first skeleton to shipped feature
- Translated Figma designs into React Native calendar, event card, event detail and attendee-summary components
- Implemented Express/Firestore endpoints for My Events and event deletion, cascading RSVP cleanup to every attendee

PROJECTS

Hangover | *Swift, SwiftUI, AppKit, Core Animation* | [Download](#) | [GitHub](#)

Oct 2026 – Present

- Extended Open Island, an open-source notch app for coding agents, into a central productivity hub with 10 SwiftUI widgets
- Unified to-dos from 6 apps like Notion, Canvas and Asana with calendar events and notes in 1 panel that opens on hover
- Synced the notch's glow to the beat by tapping system audio in Core Audio and detecting kicks across 3 frequency bands
- Cut idle CPU from 0.32% to 0.01% of a core by replacing 2-second polling with event-driven process watchers

Database Crash Simulator | *C, TypeScript, Bun, Rust, Linux* | [GitHub](#)

Aug 2026

- Independently reproduced a permanent data-loss bug in redb, a production Rust database, across 10,942 crash states
- Architected a crash simulator replaying every legal post-crash disk state on real ext4/xfs/btrfs images through DB recovery
- Devised an LD_PRELOAD C shim giving multithreaded syscalls a lock-free total order via 1 atomic shared-memory counter
- Reduced false positives from 100% to 0% by triaging all 9 flags: 7 tool defects, 1 planted control bug, 1 real redb bug

LLM Code-Switching Benchmark | *Python, pydantic, pytest, Ollama* | [GitHub](#)

Aug 2026 – Present

- Built a 402-item benchmark testing whether LLMs follow Matrix Language Frame theory in Spanish-English code-switching
- Quantified a repair-score collapse from 0.79-1.00 to 0.24-0.39 in 2 of 3 local LLMs on an English verb in a Spanish sentence
- Engineered an eval harness with bootstrap confidence intervals and a hash-keyed cache, making rescoring free (290 tests)

SwipeBite | *Next.js, React, Express, Prisma, PostgreSQL* | [Live](#) | [GitHub](#)

Feb 2026 – Present

- Launched a Tinder-style restaurant discovery app on Vercel and Render, secured by rotating-refresh-token JWT auth
- Designed a hybrid recommender (content-based, collaborative filtering, Thompson Sampling) re-ranking the feed per swipe
- Proxied Google Places through the Express 5 + Prisma/PostgreSQL API to keep keys off the client, covered by 153 tests

LEADERSHIP & ORGANIZATIONS

Full-Stack Developer

Sep 2025 – Present

LA Blueprint

Los Angeles, CA

- Earned selection at a 4% acceptance rate to a student org building full-stack products for LA nonprofits
- Presented architecture proposals and facilitated sprint planning and design reviews across project teams
- Scoped web applications with prospective nonprofit partners, translating their needs into project requirements

ADDITIONAL

Awards: Dean's List; Southern California Research Symposium; Bay Area Honors Undergraduate Research Conference

Interests: Double Bass (music theory & performance), School on Wheels tutor