

Daniel Mastick

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EDUCATION

University of California, Los Angeles

Los Angeles, CA

B.S. Computer Science, Minor in Music Industry; 3.67 GPA

Expected June 2027

- **Coursework:** Data Structures & Algorithms, Operating Systems, Programming Languages, Artificial Intelligence, Databases, Computer Architecture, Software Engineering, Neural Networks, Data Science, Linear Algebra, Differential Equations, Calculus I, II & III, Statistics
- **Awards:** Sharpe Fellow (UCLA) | Gemini UCLA Hackathon Winner | 5× Hackathon Qualifier | MentorSEAS Mentor

EXPERIENCE

Amazon Web Services

Mountain View, CA

Software Development Engineer Intern

June 2026 – Sept. 2026

- Designed and shipped the **Enhanced Staging Bar**, an author-awareness panel for AWS Marketing's **Adobe Experience Manager (AEM)** publishing platform that computes a live publish-sync verdict across **5 states** in **under 200ms**, showing **300+** AWS.com authors whether a page matches production
- Reverse-engineered the existing notification-bar stack (**Sling model**, **HTL**, **authoring clientlib**, **editor overlay**) across **11 modules**, then reused an in-repo replication-timestamp precedent to de-risk the core sync logic
- Prototyped all **5 badge states** and a **Coral UI** acknowledgment dialog with a publish-drift timeline in HTML/CSS and **Figma** to validate the UX before implementation
- Reached **95% author adoption within 2 weeks** of production launch, replacing **3–5 minutes** of manual publish-state verification per page with an at-a-glance check and eliminating recurring stale-content incidents

NASA Jet Propulsion Laboratory

Los Angeles, CA

Software Engineering Intern – Identity & Access Management, Flight Systems

May 2025 – Dec. 2025

- Replaced JPL's manual federation onboarding with an internal **SSO intake platform** (**OAuth 2.0/OIDC** validation, automated request lifecycle), saving **120+ engineering hours** and **\$200K a year**
- Designed and deployed a **RAG assistant** unifying documentation across **4 identity domains** (Linux, SSO, LDAP, access management), cutting troubleshooting time **60%** for **200+ lab engineers**
- Automated telemetry preprocessing and feature extraction for flight systems with **Python ETL pipelines**, speeding up mission engineering analysis by **40%**

Corsair (via DataRes @ UCLA)

Remote / Los Angeles, CA

Software Development Consultant

March 2026 – June 2026

- Built a **React/PostgreSQL dashboard** that gave Corsair's product team one live view of **4 signal streams** (product sentiment, competitors, reviews, community discussion) scraped from **Reddit and Amazon**
- Wrote **2 Python scrapers** (**PRAW**, **Playwright**) feeding a sentence-level sentiment pipeline (**VADER + RoBERTa**) that ingests idempotently into **Postgres** via SHA-256 dedupe keys
- Added **alerting and AI-summary pipelines** that replaced **5+ hours** of weekly manual market monitoring

UCLA Department of Computer Science

Los Angeles, CA

Head Teaching Assistant – CS 31 & CS 32 (Intro CS, Data Structures & Algorithms)

Sept. 2025 – Present

- Teach weekly **C++ labs** for **35 students** and lead TA operations across **2 core courses**, covering memory models, pointers, and data structures; author review materials used course-wide by **300+ students**
- Coordinate the TA team across both courses, run midterm and final review sessions each quarter, and hold weekly office hours for 1-on-1 debugging help

PROJECTS

Aida | *React Native, Expo, Next.js, MongoDB, Gemini, ElevenLabs*

May 2026

- Built a **mobile health app** that turns wearable biometric data into a booked doctor's appointment: **Gemini** plain-language health summaries, multilingual support, and an **ElevenLabs + Twilio voice agent** that calls providers to schedule
- Integrated **7+ external services** (World ID identity, Cloudinary, Expo push, MongoDB Atlas) behind an **8-step patient flow** from signup to provider-visible intake summary
- Structured the app as a **3-package TypeScript monorepo** with an Expo mobile client, Next.js API backend, and shared types package; ran health-data inference on-device with **ZETIC Melange**

Riff | *React, TypeScript, Firebase, Gemini, Lyria*

March 2026

- Built an **AI-native music studio** with **3 subsystems** (Studio, Coach, Library) that turns hums, lyrics, and Spotify references into structured song **Blueprints** and full audio renders with **Gemini and Lyria**
- Paired every Blueprint with an auto-generated practice **Learn Pack** (section guides, chord cues, memory aids) via the **Coach** subsystem, built on **React 19 + Zustand**
- Synced projects across devices with **Firestore**; built an export pipeline for **3 formats**: renders, vocal stems, and MIDI

LEADERSHIP

Creative Labs @ UCLA | *VP of Product & Technology (prev. Product Manager, Software Developer)*

Sept. 2023 – Present

Innovative Design @ UCLA | *VP of External Affairs*

Sept. 2025 – Present

Association of Chinese Americans @ UCLA | *Financial Vice President (prev. Social Chair)*

Sept. 2024 – Present

Association for Computing Machinery @ UCLA | *Workshop Director (prev. Hack Ops Officer)*

Sept. 2023 – Present

TECHNICAL SKILLS

Languages: Python, C++, Java, TypeScript, JavaScript, SQL, HTML/CSS, Swift

Frameworks & Libraries: React, React Native, Next.js, Expo, Flutter, Node.js/Express, Django, Flask/FastAPI, Spring Boot

AI & Data: PyTorch, TensorFlow, Keras, scikit-learn, HuggingFace, CUDA, NumPy, Pandas, OpenCV, RAG, CrewAI, Gemini API, Cursor, Claude Code, Codex, Antigravity, opencode

Databases & Cloud: PostgreSQL, MongoDB, Supabase, Firebase, Qdrant, AWS (DynamoDB, S3, EC2, Lambda), GCP, Vercel, Railway

Developer Tools: Git, Linux, Docker, Kubernetes, REST APIs, GraphQL, OAuth 2.0/OIDC, Figma, Postman, Jupyter

Interests: Triathlon, Climbing, Fingerstyle Guitar, Chess, Drone Design, Film Photography, Classical Music