

Diego Cordova

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EDUCATION

University of California, San Diego *B.S. Cognitive Science, Concentration: Design & Interaction* Grad. 2026

- **Technical Implementation & AI:** Machine Learning & Neural Network Development: Engineered artificial neural networks and perceptron algorithms using NumPy for vectorized array processing and Matplotlib for loss visualization.
- **Neural Signal Processing:** Conducted BCI research involving EEG data analysis, applying ICA (Independent Component Analysis) and PCA (Principal Component Analysis) to isolate neural artifacts (errors).
- **Web Development & Human-Computer Interaction (HCI):** Full Stack Web Design & HCI: Developed interactive web interfaces using JavaScript, HTML, and CSS, utilizing VSCode and CodePen for rapid prototyping and cross-course data analysis.
- **UI/UX & Visual Engineering:** Leveraged Figma, Vercel production; interface design, focusing on human-computer interaction principles to optimize user experience by 75%
- Sigma Phi Epsilon Active Member — manage a \$10,000 budget as mem-dev executive member

EXPERIENCE

TritonNav – Navigational UCSD App *Founder, Product Designer, Software Engineer* Oct. 2025 – Sept. 2026

- Developed iOS-focused campus navigation product that helps UCSD locate classrooms, buildings, services, and accessible routes
- Implemented Valhalla-powered walking-routing engine that processes route geometry, and Maplibre mapping interface, Supabase and PostgreSQL architecture for storing UCSD data
- Managed development through GitHub branches, Docker services, environment configurations, testing workflows, and Vercel deployments(web-app version)

Bilingualism in Context Lab *Research Assistant* Jan. 2025 – April. 2026

- Cleaned raw data from bilingual verbal descriptions in a tangrams puzzle, annotating with 2+ language tags
- Added role-based utterance counts to 800+ Excel entries; collaborated with a team to manage 2,000 entries
- Merged 5+ datasets with 4+ RAs, reapplied language tagging, and resolved 3 types of debugging issues using IDE agents

Quicktaxes Inc. *UX UI Web Designer and product developer* Jan 2024 – June. 2026

- Created wireframes, interactive prototypes, and production-ready website interfaces using Figma, Vercel, Framer,
- Design Agents: Figma AI, Lovable to prototype, utilizing HTML CSS and JavaScript skills for business, designed +10 businesses
- Reported on product performance and progress and provided regular updates to owners and senior management.

Diego Cordova Studio *Developer* May 2026 — June 2026

- index.HTML, WIX, APIs, Collaboration with UCSD based foundation, API for backend software development. Designed and activated an appointment scheduling system for my employer and their prospective clients, acquiring 8+ clients
- Figma Design Software implementation, Lovable AI implementation, for prototypes of San Diego Clients: DASHI SUSHI
- Design Review, component audits, usability testing, comparing prototypes, running large-scale component migrations.

Brain Computer Interface Research Project *Machine Learning Product Designer* —

- Designed a video game with EEG (electroencephalogram) and BCI (brain-computer interface) utilizing a wearable headset to translate neural activity (eye blinks) into game controls
- Processed and cleaned EEG signals in python and trained ML model to detect brain activity, interpreted in Python to control game actions like movement, focus-based mechanics, or selections: Flappy Bird Game, trained ML model in cleansing data.

Machine Learning Project *Developer* 2025 – 2026

- Developed a Multiclass Softmax Classifier from Scratch—Developed and vectorized a Softmax regression model using NumPy to classify the Iris dataset, achieving 0.1 test error = 90% accuracy, includes 150 samples, Data Splitting: 105 samples for training and 45 samples for testing Processed and cleaned EEG signals in python and trained ML model to detect brain activity, interpreted in Python to control game actions like movement, focus-based mechanics, or selections: Flappy Bird Game, trained ML model in cleansing data.
- Completed additional work involving clustering, PCA, probability distributions, neural networks, and statistical modeling