

Diego Cuadros

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Computer Science student with a direction in embedded systems and large language models. Researching low-resource language machine translation, while also building embedded software projects to create next-generation technology products.

Education

Loyola Marymount University

Los Angeles, CA

Bachelor of Computer Science

GPA: 3.7

Date of Graduation: May 2027

Coursework: Artificial Intelligence, Operating Systems, Web Development, Algorithms, Data Structures, Cognitive Systems

Memberships: Society of Hispanic professional Engineers (SHPE), Association for Computing Machinery (ACM), 3D Printing, Latinx Student Union, AWS Cloud Club

Skills

Languages: Python, JavaScript, Typescript, C, C++, Rust

Technologies: APIs, OpenCV, Linux, OpenAI, MongoDB, Node.js, React.js, Numpy, Git, MySQL, CAD

Soft Skills: Problem-solving, Leadership, Product Management, Adaptability, Customer Service, Collaboration

Experience

Kubishi Reasearch Assistant: *Few-Shot Learning* / *Vector Databases* / *LLM*

October 2024 – Present

- Research on **LLM-Assisted Rule-Based Machine Translation** to improve translation for low-resource languages, **embeddings and vector databases** to enhance LLM retrieval of linguistic structures for context-aware translations.
- Language adaptation with minimal training data using **few-shot learning**, translation learning system with dictionary lookups, grammatical structure analysis, and example-based learning using **RAG**,
- Presented a paper in North American Association for Computational Linguistics** on a chatbot for endangered language revitalization, built an **ablation study** through LMU's Advanced Research Program to evaluate low-resource translation methods, showing that **combining RAG tools can yield a 50% increase in translation accuracy**.

SHPE President *Leadership* / *Management*

June 2025 – Present

- Ran biweekly meetings, owned conference trip budgeting and led multi-channel club marketing (email, IG, flyers, tabling) to over **100 members**. **Increased membership turnout by over 50%**.
- Planned region wide SHPE events chapter coordination, management, budget control, run-of-show, risk/comms plans, and strengthened regional networking and industry engagement.

Application Developer *Full Stack Development* / *Databases*

January 2022 – Present

- Enhanced online presence and operational efficiency** of businesses by developing web applications, leading tp in **increased customer engagement**, through utilization of **modern JavaScript frameworks** like **Next.js** and **React** to build responsive user interfaces with backend functionality.
- Successfully launched **Crystal Clear Solutions**, which led to a **65% increase in service inquiries**, managing all phases from conceptualization to deployment. Other web applications built include **Cuadocs**, **MyMoneyBuddy**, and **Cuadconnect**,

Projects/Certifications

B2B Sales AI Multi-threaded Research Agent *Multithreading* / *AI Web Scraping*

July 2025 - September 2025

- Built a **GPT-5 powered multi-threaded research agent** in Python leveraging Tavily AI search and **asynchronous pipelines** to synthesize public and private company data (SEC filings, earnings, initiatives, 5-year histories).
- Automated the generation of outside-in company profiles highlighting strengths, weaknesses, goals, and risks **cutting research time by 90%+** and saving B2B sales teams **20+ hours per week**. Delivered documents that uncovered insights for sales reps, providing opportunities for relationship-building and closing deals. Designed the system to scale through **50+ companies weekly**, with **real-time summarization and synthesis of datasets**.

Spot Share Startup Hackathon - 4th place *Nextjs* / *API* / *Software Development*

October 2025

- Built a Next.js web app (React + Tailwind) to monetize parking spaces, with a full owner/renter flow: listing, search, booking, and turn-by-turn navigation; integrated Google Maps API (geocoding, map tiles, markers, directions) and client-side route guards.
- Implemented Stripe for payments/escrow and Firebase for auth, realtime DB, and hosting; designed role-based data models, secure serverless functions, and end-to-end booking lifecycle.

Infrared Camera Detection *OpenCV* / *Socket Networking* / *Python*

June 2025

- Developed a real-time thermal camera system using a Raspberry Pi and **Topdon TC001 infrared sensor** to **stream temperature data over TCP**. Captured, serialized, and transmitted 24×32 thermal frames at 2 Hz using **socket programming**; on the client, received and **deserialized data**, **applied normalization** and **OpenCV colormaps**, and displayed a dynamic heatmap for monitoring.

Certifications

- CS50x (Harvard University):** Gained proficiency in C, Python, and JavaScript via projects such as a financial budgeting app, investment software, and media processing tools (image filters, audio editing in C).