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

Skills

Languages: Python, JavaScript, Typescript, C, C++, Rust
Technologies: APIs, OpenCV, Linux, OpenAI, MongoDB, Node.js, React.js, Numpy, Git, MySQL
Soft Skills: Problem-solving, Leadership, Product Management, Adaptability, Customer Service, Collaboration

Experience

Kubishi Reasearch Assistant October 2024 – Present
Few-Shot Learning | Vector Databases | OpenAI

- Conducted research on **Large Language Model-Assisted Rule-Based Machine Translation** (LLM-RBMT) to improve translation capabilities for low-resource languages, specifically Owens Valley Paiute; developed **embeddings and vector databases** to enhance LLM retrieval of relevant linguistic structures for more accurate, context-aware translations.
- Implemented **few-shot learning techniques** to enable efficient language adaptation with minimal training data, engineering a translation learning system that mimics human strategies by integrating **retrieval-augmented generation (RAG)**, dictionary lookups, grammatical structure analysis, and example-based learning.
- Presented a paper in **North American Association for Computational Linguistics (NAACL)** on a chatbot for endangered language revitalization, demonstrating progress on translating and teaching critically low-resource languages.
- Built an **ablation study** through LMU's Summer Opportunities for Advanced Research to evaluate low-resource translation methods, showing that **combining RAG tools can yield a 50% increase in translation accuracy.**

Application Developer October 2022 – Present
Full Stack Development Technologies | Databases | Product Management

- **Enhanced online presence and operational efficiency** of diverse businesses by designing and developing websites tailored to their needs, resulting in **increased web traffic and customer engagement**, through the utilization of modern JavaScript frameworks like **Next.js and React** to build responsive user interfaces with backend functionality.
- Improved **client brand representation and customer service**, as demonstrated by the successful launch of https://crystalclearsolutions.co, which led to a **25% increase in service inquiries**, by spearheading its full-stack development and managing all phases from conceptualization to deployment.
- Delivered **high-performing, scalable web solutions** that enhanced user engagement by employing modern development frameworks and deployment techniques, including **continuous integration and deployment workflows** on platforms like **Heroku and Vercel**, resulting in rapid and reliable website updates and improved user satisfaction.

Projects

B2B Sales AI Multi-threaded Research Agent July 2025 - September 2025
OpenAI | Asyncronous Programming | Prompt Engineering | Website Scraping

- Engineered 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 structured, decision-ready documents that uncovered non-obvious insights for sales reps, enabling them to focus on relationship-building and closing deals. Designed the system to scale across **50+ companies weekly**, with asynchronous architecture ensuring **real-time summarization and synthesis of complex datasets.**

Infrared Camera Detection March 2025 – April 2025
OpenCV | Sockets | Python

- 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.

Awards, Certifications, Events, Memberships

- **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).
- **President, Society of Hispanic Professional Engineers (SHPE):** Led chapter operations including budgeting, event planning, and industry networking helping members prepare for jobs; developed leadership, conflict resolution, and strategic planning skills.