

FELIPE VELASQUEZ

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SUMMARY

Computer Science graduate (Magna Cum Laude, 3.85 GPA) with hands-on experience building software and AI-powered systems end-to-end. Strong foundation in software engineering, systems design, data processing, and AI/ML, with experience taking projects from development and integration through testing and deployment. Demonstrated ability to solve complex technical problems, learn new technologies quickly, and build reliable solutions with measurable impact.

EXPERIENCE

Founder & Lead AI Engineer Aug 2025 – Present

EDGE · Foster City, CA

- Built an AI-powered enterprise search engine from scratch, delivering low-latency retrieval over unstructured business data through a hybrid FAISS-semantic + BM25 pipeline with RRF fusion and 384-dim embeddings. Designed the system end-to-end, including data ingestion, indexing, retrieval, and fully on-device LLM inference with zero cloud dependency.
- Engineered and optimized the RAG pipeline, reducing query latency ~49% (12.7s → 6.5s) through per-stage profiling, elimination of redundant LLM calls, and optimization of chunking and ranking.
- Systematically evaluated local LLMs across quality, latency, and accuracy, optimizing model selection and routing to achieve ~2× faster inference for lightweight tasks without measurable accuracy loss while preserving higher-capability models for answer synthesis.
- Serve as the sole engineer on a 3-person team, owning system architecture, implementation, deployment, debugging, and code quality across the full product lifecycle.

IT Systems & AI Automation Specialist (Part-time) Sep 2025 – Jun 2026

TechPro Builders · San Carlos, CA

- Automated 3–4 critical business workflows using Airtable and Zapier for expense tracking, inventory, and reporting, eliminating ~10 hours/week of manual work and \$1,500+/month in operating costs.
- Prototyped LLM-powered tools to improve access to project information, images, documentation, and customer data, supporting faster information retrieval and more efficient field-technician workflows.
- Owned the company's full technical infrastructure, including storage, backup, networking, security, and broadband, maintaining reliable access across business systems.
- Identified a service gap and built a recurring-revenue program generating \$20,000/year, designing the model and executing the rollout end-to-end.

Technology & Digital Operations (Intern → Staff) May–Aug 2024 · May 2025 – Present

Evolution Burlingame / Peninsula Tennis Club · Burlingame, CA

- Automate digital operations workflows and rebuild audience segmentation, improving outreach efficiency across customer channels.
- Managed and optimized internal customer databases with MySQL, improving data organization, accessibility, and reliability for staff.
- Maintained and debugged the club website using HTML, CSS, and WordPress, resolving technical issues and supporting reliable day-to-day operation.
- Coach tennis players of all ages, designing individualized training plans and coordinating weekly sessions to support skill development and foster a positive, collaborative environment.

PROJECTS

LLM Performance Benchmarking Study — Academic Symposium, Tusculum University Spring 2025

- Built a controlled evaluation framework comparing ChatGPT, Claude, DeepSeek, and Gemini across standardized programming tasks, capturing latency, accuracy, and task-suitability metrics; presented at a formal poster session.

Boone Lake Water Quality Platform — Full-Stack Developer, Greeneville, TN Spring 2025

- Built a PHP/MySQL web app for multi-zone environmental monitoring with role-based access control, automated threshold alerts, and a data-visualization dashboard.

EDUCATION

Bachelor of Science in Computer Science May 2025

Tusculum University — GPA 3.85 | Magna Cum Laude · Coursework: Data Structures & Algorithms, Machine Learning, Operating Systems, Software Engineering, Database Management, Cybersecurity

TECHNICAL SKILLS

AI / ML: RAG, information retrieval, LLM inference & evaluation, prompt engineering, model deployment

Languages: Python, JavaScript, SQL, PHP, HTML, CSS

Systems & Data: data-processing pipelines, indexing/retrieval, Linux/Ubuntu 22.04, WSL2, performance optimization

Frameworks & Tools: Next.js, Node.js, MySQL, Git, WordPress, VS Code

Practices: system design, debugging, code review, CI/CD, Agile