

Martín S Vizcaíno Rivas

Software Engineer

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Software engineer focused on backend systems, data-driven applications, and scalable cloud infrastructure. Experience building production systems using Python, JavaScript, Django, Docker, Kubernetes, and AWS in start-up and research environments. Strong foundation in mathematics and data science with hands-on experience in analytics, API design, and system architecture.

EDUCATION

Bachelor of Science, Computer Science

2024 – Present

University of Indianapolis – Indianapolis, IN

GPA 3.91/4.00

Relevant coursework: Data Science, Mathematics, Linear Algebra, Probability, Algorithms

EXPERIENCE

Software Engineer Intern — Apps & AI – Hoosier Racing Tire Corp.

Summer 2025

- Built a cross-platform inventory app (Flutter/Dart + SQL) for Web, iOS, and Android.
- Enabled real-time tracking across 5+ warehouses, cutting manual reconciliation time by 40%.
- Developed an AI-powered internal sales agent to handle client inquiries, improving response time and consistency.

Undergraduate Researcher – University of Indianapolis

August 2024 - Present

- Engineered a 3-DOF SCARA arm (MATLAB/Simulink + PixyCam) for vision-guided pick-and-place.
- Implemented inverse kinematics and motion control, improving accuracy by 30% over 100+ tests.
- Selected for NSF-funded I-Corps Jumpstart Program to explore commercialization of SCARA robotics.

AI Research Intern – SmartCorp

Summer 2024

- Implemented and benchmarked recommendation algorithms (CF, MF, and SVD) on 10 K+ user-item records.
- Applied deep learning (VAEs), improving personalization accuracy by 12% (precision@10).

Carrot — Co-Founder & Backend Backend Systems Engineer

November 2025 – Present

- Architected a multi-LLM routing backend (FastAPI + Supabase + pgvector) with task-based model selection and provider fallback logic.
- Built a cost-aware LLM orchestration layer with provider fallback and token optimization.
- Implemented authentication, usage metering, and quota enforcement across providers.
- Deployed production infrastructure on Render + Vercel with CI/CD and environment isolation.

CAPTE Standards Mapping Platform — Technical Lead & Systems Engineer

August 2025 - Present

- Leading a 5-person engineering team delivering an enterprise accreditation platform for a live university client.
- Architected Firebase + Python backend ingesting 100+ course artifacts and structured syllabus data.
- Designed LLM-based mapping pipeline (Gemini) generating evidence-backed accreditation rationales.
- Standardized structured PDF outputs for accreditation reviewers.
- Reduced accreditation prep time from hours per course to automated report generation.

PROJECTS

On-Device CSV Cleaner — iOS (Swift, MLX, Core ML)

2025

- Built an offline CSV cleaning tool using on-device AI for PII removal and privacy-compliant data prep.

Sanctum — Chrome Privacy Filter (TypeScript, Manifest V3)

2025

- Client-side Chrome extension that redacts PII before prompts are sent to ChatGPT, Claude, or Gemini.

Real-Time Market Data Analysis (FastAPI, PostgreSQL, React)

2025

- Built a real-time stock data pipeline with REST APIs and an analytics dashboard.

CORE SKILLS

Backend & Systems Engineering

- FastAPI, Django, REST APIs, Node.js, PostgreSQL, SQLite
- Microservices, async systems

Frontend & State Management

- JavaScript, TypeScript, React, Redux

Cloud & DevOps

- AWS, Docker, Kubernetes, Google Cloud Platform

Security & Governance

- SQL, Analytics pipelines, Data science fundamentals

Programming Languages

- C++, Python, C#, JavaScript, TypeScript, HTML/CSS

CERTIFICATIONS

- AWS Certified Cloud Practitioner – Amazon Web Services
- CompTIA Security+ – CompTIA

December 2025

September 2025

HONORS & ACTIVITIES

- Participant, MISO TechPoint Extern Challenge — Indiana Energy Innovation Cohort.
- Member, IEEE Computer Society– Institute of Electrical and Electronics Engineers