

COLE CALDERON

AI Engineer | LLM / Agent Systems

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SUMMARY

AI Engineer with 2+ years building production LLM and agent systems at scale. Shipped a re-vetting pipeline enabling **1M+ in recovered revenue** and led an LLM initiative converting tribal knowledge into executable playbooks used daily across an analyst org. Deep in Python and SQL; owns the full stack from data architecture through agent loop design, observability, and deployment. Strong statistical grounding from an M.S. in Business Analytics and published research background.

EXPERIENCE

AI Engineer / Data Scientist

Feb 2024 – Present

ERISA Recovery · Plano, TX

- Designed and shipped a claim re-vetting prioritization pipeline that directly enabled **1M+ in recovered revenue**—surfacing written-off claims for re-review with daily/weekly throughput and human-in-the-loop guardrails.
- Led an LLM initiative converting SOPs, training material, and analyst tribal knowledge into **structured recovery playbooks**, reducing dependence on senior experts and improving onboarding consistency across denial categories.
- Architected a reusable **Agent SDK** standardizing tool routing, Pydantic-validated schemas, prompt conventions, structured outputs, and observability hooks—deployed across multiple internal LLM projects.
- Built end-to-end **KPI and scorecard infrastructure** tracking throughput, quality, and recovery yield org-wide; separated volume/quality metrics to prevent broken incentives, with daily/weekly refresh.
- Improved new lead generation rate **2–3x** through operational pipeline and process improvements.
- Deployed **local LLM serving** (Ollama, vLLM) for low-latency, cost-effective inference—eliminating API dependencies for sensitive operational data.
- Built **RAG pipelines** with Milvus vector database integrated into in-house vetting software, enabling similarity-based claim research and reducing analyst lookup time significantly.
- Containerized and deployed services via **Docker** with CI/CD managed through **Azure DevOps**, enabling reliable, reproducible builds across environments.

Research Assistant — Data Visualization / Microbiology

2020 – 2021

Arizona State University · Tempe, AZ

- Built Python image analysis tools to track bacterial movement; contributed to a published research article and led a web-scraping pipeline that expanded lab research scope.

TECHNICAL SKILLS

Languages	Python (expert), SQL (expert), R
LLM / AI	LLMOps, Ollama, vLLM, LangChain, LangGraph, Langfuse, Langwatch, HuggingFace, RAG, Agent loop design
Vector / Data	Milvus, PostgreSQL, Pandas, NumPy, Scikit-learn, TensorFlow, Keras, Hadoop, HIVE
APIs / Backend	FastAPI, Pydantic, REST API design
Infra / DevOps	Docker, Docker Compose, Azure DevOps, CI/CD
BI / Analytics	Power BI, DAX, SAS, matplotlib, ggplot, dplyr
Certifications	Google Data Analytics Specialization

EDUCATION

M.S. Business Analytics

2023

University of Texas at Dallas, Richardson, TX

Relevant coursework: Advanced Statistics for Data Science, Applied Machine Learning, Data Visualization, Big Data, Business Analytics with R

B.S. Biology

2020

St. Edward's University, Austin, TX

Relevant coursework: Applied Statistics, Biostatistics