

STEVEN “Steve” ARCHULETA

Data Science & Machine Learning | Financial Engineering & Risk Analytics | MLOps | Generative AI / NLP

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Santa Rosa, CA | U.S. & Portuguese citizenships; USA & EU eligibility | Open to remote, hybrid, or full relocation

SUMMARY

Master of Science in Financial Engineering (WorldQuant University, June 2026; coursework average 91%, capstone 96%). Combines applied machine learning, quantitative finance, and generative AI skills. Proficient in Python-based data science and ML workflows — from EDA and feature engineering through model training, evaluation, and MLOps deployment. Ranked #1 of 30 peers in Generative AI for NLP; ranked top 20% in the UT Austin AI & ML postgraduate program 3.92 GPA. Seeking roles in data science, AI/ML engineering, quantitative research, financial engineering, and/or risk analytics. Nonlinear career spanning NIH biomedical research, California State IT, STEM teaching, and eight years of multi-store retail entrepreneurship directing 21 employees. Strong communicator and proven leader across technical, academic, entrepreneurial and cross-functional environments.

TECHNICAL SKILLS

Programming & Data: Python (Pandas, NumPy, SciPy, scikit-learn, statsmodels, TensorFlow/Keras, XGBoost, LangChain, Streamlit), SQL (MySQL, T-SQL), MLflow, FAISS, Excel, Git/GitHub

Machine Learning / Deep Learning: Regression, classification, Random Forest, XGBoost, gradient boosting, ANN, CNN, LSTM, time-series forecasting, cross-validation, hyperparameter tuning, error analysis

Finance / Risk / Quantitative: Portfolio analytics, VaR/CVaR, volatility forecasting, risk targeting, factor modeling, causal-aware modeling, Directed Acyclic Graph modeling, derivative pricing, stochastic modeling, econometrics, walk-forward backtesting

Generative AI / NLP: LangChain agents, RAG pipelines, OpenAI API, Azure OpenAI, embeddings, prompt engineering (system prompts, few-shot, structured reasoning workflows), structured outputs, grounding evaluation, hallucination detection, GRPO/RLHF concepts.

Platforms & Tools: Jupyter, VS Code, Azure ML Studio, Azure Container Apps, GitHub Actions CI/CD, Conda, Docker basics, pytest, Matplotlib, Seaborn, Power BI, Tableau

Web Development: HTML5, CSS3, JavaScript, React, Node.js, Express, MongoDB

FEATURED PROJECTS

RiskML Capstone — Causal-Aware Risk Forecasting & Factor Construction | WorldQuant University | 2026

- End-to-end ML-driven risk-forecasting pipeline integrating 458,662 NLP-derived sentiment signals, a 9-node directed acyclic graph (DAG), DAG-informed XGBoost and LSTM forecasting models, and a 7-model portfolio backtest across 2,798 trading days; capstone score 96%.
- Deployed Streamlit dashboard to Azure Container Apps with OIDC-based CI/CD; modular six-subpackage Python architecture (etl, features, models, causal, portfolio, backtest).

[GitHub Repo](#) · [Live Dashboard](#) · [Video Walkthrough](#)

LLM Data Science Assistant — RAG-Powered Analytics Agent | Great Learning | 2024–2026

- Built, then extended, a LangChain/OpenAI RAG assistant into a modular Azure MLOps data-science agent with deterministic EDA, plotting, statistics, ML, SQL, and FAISS retrieval tools; validated with GitHub Actions CI, Azure ML pipelines, OIDC authentication, and ACR image publishing.

Azure MLOps CI/CD Portfolio — Reproducible ML Pipelines | Personal & Academic | 2025–2026

- Built Python-based reproducible workflows across used-car pricing, medical-manual RAG retrieval, Auto MPG, machine-failure, and diabetes projects; implemented Azure ML data assets, reusable components, preprocessing pipelines, model training/evaluation, MLflow logging, model registration, FAISS indexing, GitHub Actions CI/CD, Docker, and versioned artifacts.

PROFESSIONAL EXPERIENCE

IT Student Assistant | California Dept. of Social Services | Sacramento, CA 2021–2024

- Authored a division-wide business-case report comparing AWS Connect vs. Verizon InContact, translating operational requirements into cost, scalability, and service-risk criteria; projected ~\$1.2M annual savings.
- Managed internal/external web pages and Section 508/WCAG accessibility remediation; produced evaluation tables, charts, and executive-ready narratives for leadership.

Owner / Operator | The Good Life Market & The New General Store | Howard County, MD 2005–2013

- Founded, operated, and scaled three boutique retail stores; directed 21 employees across hiring, payroll, scheduling, performance management, and vendor negotiations; managed P&L, multi-store budgets, A/R, A/P, and contracts.
- Applied exploratory data analysis on customer demographics, repeat-purchase behavior, and sell-through rates; achieved consistent 10% year-over-year sales growth. Featured in The Washington Post Magazine; recognized with Best of Baltimore (2 consecutive years).

Science & Technology Teacher | Saint Mary's College High School / Howard County Schools | CA / MD 2000–2005

- Taught Chemistry, Biology, Technology Education, and Basic Drafting; developed lab-based curricula, issued final grades, and communicated complex scientific concepts to diverse learners.

Biomedical Research Fellow | National Institutes of Health (NHLBI) | Bethesda, MD 1998–2000

- Investigated bioprosthetic heart-valve pathology using immunohistochemical, fluorescence, confocal, and transmission electron microscopy techniques; co-authored two peer-reviewed articles in *Circulation*.

Additional Concurrent Employment | Friedman's Home Improvement (Nursery) | Santa Rosa, CA | 2024–Present

- Part-time customer-service during the MScFE program and while building Azure ML / MLOps portfolio projects.

EDUCATION & CERTIFICATIONS

M.Sc. Financial Engineering | WorldQuant University | Graduated June 2026 · [Verify](#)

Coursework average 91%; capstone 96%. Courses: Financial Econometrics (94%), Deep Learning for Finance (93%), Derivative Pricing (93%), Risk Management (92%), Financial Data (90%), Machine Learning in Finance (90%), Portfolio Management (88%), Financial Markets (86%), Stochastic Modeling (86%).

B.A., Diversified Liberal Arts | Saint Mary's College of California · [Diploma](#)

Reinforcement Learning for LLMs (GRPO) | Ragpack.ai | 2026 · [Certificate](#)

Microsoft AI Professional Program | Great Learning | Azure AI, Azure ML Studio, Azure AI Foundry, CI/CD | 2025

Generative AI for Natural Language Processing | Great Learning | Ranked #1 of 30 peers | 2024 · [Verify](#)

Post-Graduate Program — Artificial Intelligence & Machine Learning | UT Austin / McCombs School of Business | GPA 3.92, Ranked 35/176 | 2022 · [Verify](#)

SQL & Database Architecture | Great Learning | 2022 · [Verify](#)

Advanced Data Analytics Immersive Fellowship (400 hrs) | General Assembly | 2020 · [Certificate](#)

MERN Full-Stack Web Development Boot Camp | University of California, Davis | 2019 · [Certificate](#)

PUBLICATIONS

Co-authored in *Circulation* (American Heart Association):

1. *Laser Scanning Confocal Microscopy: An Emerging Technique for the Pathologic Evaluation of Cardiac Devices*
2. *Polymeric Scaffold Tissue Engineered Heart Valves: Explant Pathology*

TARGET ROLES

Applied Data Scientist | Risk / Forecasting Analyst | Financial Engineering Analyst | GenAI / RAG Engineer