ROBERT SHELTON

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EXPERIENCE

Sr. Applied AI Engineer

Redis

Apr 2024 – Present Richmond, Virginia

- Open-source contributor: `redis-vector-library`, `langchain-redis`, `langgraph-redis`, `llama-index`, and `agno-ai`.
- Lead developer of Rain, a task–driven distributed AI agent, featured at MLops and re:Invent.
- Top contributor to `redis-ai-resources` (363+ GitHub stars) with extensive AI coding examples spanning multiple use cases.
- AI SME attributed to 5.3M ARR in 2025. Led pre-sales AI enablement in addition to post-sales support for edge portfolio technology through adoption.
- Author `redis-retrieval-optimizer`, a package for vector index optimization across information retrieval workloads. Co-author `sql-redis`, a parser from sql to redis query language to power low latency sql-like commands.

Tech Lead & Senior Software Engineer

Torqata Data & Analytics

Dec 2021 – Jan 2024 Richmond, Virginia

- Led development and maintenance of an automated supply chain replenishment system responsible for ordering approximately $10,000 worth of tires nightly.
- Facilitated strategic product meetings and coordinated execution timelines for new feature delivery.
- Served as a core team member developing a Pub/Sub FastAPI backend and an Angular/Typescript frontend.
- Utilized Helm, Kubernetes, Terraform, and GitHub Workflows on GCP within a streaming microservice architecture.
- Conducted inventory and logistics analysis (Python, SQL, Pandas) to generate stocking recommendations for retailers.

Machine Learning Engineer

Levvel.io

Jul 2020 – Dec 2021 Charlotte, North Carolina

- Served as primary developer for a Python microservice optimizing warehouse pallet movement (logistics and manufacturing) based on an academic white paper.
- Owned the lifecycle of a TensorFlow neural network: data ingestion, training and maintenance.
- Implemented threading logic to reduce system wait times for long-running algorithms.
- Established and maintained CI processes for deploying algorithms to multiple warehouse systems.

COMMUNITY

- Micah's Backpack: inventory manager and board member for community feeding program.
- Sustainable Logistics Research: Developed an interactive optimization tool for sustainable biomass logistics using Gurobipy and Simpy.

EDUCATION

Virginia Tech
Industrial & Systems Engineering, 2020 (logistics and manufacturing)

Kubernetes
Certified Application Developer, 2022

Amazon Web Services
Certified AWS Developer, 2020

SPEAKING

Optimized.ai

Delivered keynote and workshop on context engineering. Video link

PyData

Delivered a hands-on workshop at UVA's McIntire School of Commerce focused on real-world agent applications and deployment patterns. Video link

MLOps

Presented two talks covering evaluation-driven development for LLM systems and async task–driven agent management for custom applications. Video link

Meta Connect

Presented semantic-cache fine-tuning research during the poster session, highlighting novel approaches to retrieval efficiency.

CODING

Primary languages: Python, JavaScript, SQL.

Deployed complex, production-grade applications across both **GCP** and **AWS**.

Key frameworks and tools: LangGraph, LangChain, Terraform, Pandas, TensorFlow, FastAPI, Pydantic, SQLAlchemy, Redis, React, Angular.

Key public projects:

- https://github.com/redis-developer/redis-ai-resources
- https://github.com/redis-applied-ai/redis-retrieval-optimizer
- https://github.com/redis-applied-ai/redis-slack-worker-agent
- https://github.com/redis-developer/agents-redis-lang-graph-workshop
- https://github.com/redis-developer/sql-redis