Evan D. Oman

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Summary

Staff-level AI engineer shipping production agentic systems in financial services. Delivered a conversational AI portfolio assistant, a replayable workflow engine, and LLM evaluation pipelines. 10+ years in software dev (data, ML, AI).

Experience

Omega Point Research — ***Senior Python Software Engineer*** — **August 2023 - Present**

- ▷ Lead software engineer for AI products: architected conversational agents, agentic workflows, and LLM evaluation systems
- ▷ Built data pipelines using Spark and Databricks for risk model calculations; conduct technical interviews for eng. candidates
- ▷ Drove team adoption of agent-first development (voice dictation + AI coding tools) via demos, presentations, and coaching
- ▷ Trusted by CTO to float across teams and tackle high-priority problems; mentored intern through LLM research project

ZAIS Group LLC — ***Senior Software Architect*** — **April 2021 - August 2023**

- ▷ Led internal tooling dev for a portfolio management firm with $5.4B AUM; built data applications, analytics, and reporting
- ▷ Designed Azure cloud architecture; Airflow pipelines for multi-vendor position data synthesis; built portfolio analysis tools
- ▷ Collaborated with executives on product roadmap; self-taught structured credit domain to make informed technical decisions

Black River Systems Co. — ***Software Engineer*** — **May 2015 - April 2021**

- ▷ Developed analytical software and ML solutions for government agencies; held Secret clearance for classified project work
- ▷ Authored two successful contract proposals ($1.1M total); recognized for starting and leading a technical talk series

Independent Consultant — ***Data Science / Software Engineering*** — **2016, 2020, 2023**

- ▷ Part-time consulting for financial clients (ZAIS, Wells Fargo, DBRS); PySpark pipelines, financial modeling, data cleaning

Selected Projects

AI Teammate for Portfolio Analysis — **Omega Point Research**

- ▷ Owned Python service for AI chat: users ask portfolio questions, get data tables and charts—shipped with product launch
- ▷ Authored architecture after analyzing options; led cross-team discovery (AI, App, Platform); locked in API contracts early
- ▷ Built repository abstraction with dependency injection; added tracing for debugging; enabled AI team to test agents locally

Plan-Execute Workflow Framework — **Omega Point Research**

- ▷ Designed the workflow framework that runs multi-step agent plans (query, transform, visualize) using replayable references
- ▷ Initial version rejected by team; built working examples, iterated on prototype, earned buy-in—pattern now in production
- ▷ Led terminology standardization via literature review; consolidated 2 competing approaches into a single unified framework

AI Evaluation & Observability Pipeline — **Omega Point Research**

- ▷ Built LLM-as-Judge framework with checklist validation; transformed team from ad-hoc prompt tuning to regression testing
- ▷ Led vendor evaluation and Arize integration; enabled live evals and full reasoning traces for debugging production failures

Index-as-a-Security Platform — **Omega Point Research**

- ▷ Built data pipelines mapping index constituents to risk models and computing factor exposures; processes 1B+ data points
- ▷ Set up vendor integrations and a monitoring dashboard; built Go-Python bridge for PySpark; achieved 60x write speedup
- ▷ Debugged C extension core dumps using GDB + LLM (early 2024); contributed 2 bug fixes upstream to gopy open source

Highlight Helper — **Side Project**

- ▷ Built app that extracts text from photos using natural language queries; Vision API + LLM returns only requested content

Financial Model Engineering — **ZAIS**

- ▷ Achieved 3x Monte Carlo runtime via profiling and Numba; prototyped 250x speedup with 500+ parallel AWS λ functions
- ▷ Loan implied ratings: translated SME's Excel model to Python CLI + Teams Bot; reformulated algo as quadratic program
- ▷ Position reconciliation: matched transactions across vendors to derive cash balances; drew manager praise post-departure

Edge-Based Threat Detection System — **Black River Systems**

- ▷ Led a 3-engineer team building deep learning system for real-time signal classification on edge hardware; Keras, Ray, Docker

Skills

AI/ML: Production agentic systems, LLM evaluation (LLM-as-Judge), prompt engineering, RAG, DSPy, Claude/OpenAI, Arize
AI Dev Tools: Claude Code, Cursor, agent orchestration, custom skills/prompts, MCP (Model Context Protocol)
Languages: Python, SQL, Go, Scala, Java, LaTeX **Data:** PySpark, Databricks, Airflow, Delta Lake, medallion architecture
Cloud/Infra: AWS (Lambda, S3), Azure, Docker, FastAPI, PostgreSQL

Education

University of Minnesota Duluth — ***M.S. Applied Mathematics, CS Minor*** — **May 2015**
Bethany Lutheran College — ***B.A. Mathematics, Magna Cum Laude*** — **May 2013**