

Evan D. Oman

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Experience

- Omega Point Research** *Senior Python Software Engineer* **August 2023 - Present**
- ▷ Build scalable Python data pipelines using Spark/Databricks/Airflow, efficiently processing complex and high volume data
 - ▷ Collaborate with App and Product teams to deliver backend systems for advanced financial risk and optimization use-cases
 - ▷ Provide technical leadership and mentorship, drive refactoring of legacy systems, contribute to new GenAI-powered features
- ZAIS Group LLC** *Senior Software Architect* **April 2021 - August 2023**
- ▷ Led technical efforts to develop data-focused applications for a portfolio manager with \$7 billion in assets under management
 - ▷ Designed cloud(Azure) architecture, developed data pipelines(Airflow), implemented complex financial calculations(Python)
 - ▷ Worked with executive leadership to set project direction, interpreted domain knowledge from SMEs to guide rest of team
- Self-Employed** *Data Science Consultant (Part Time)* **2016, 2020, 2023**
- ▷ Worked part-time as a data science consultant with Salt IO for clients in the financial industry(ZAIS, Wells Fargo, DBRS)
 - ▷ Gathered requirements from clients; researched and evaluated approaches; developed and released software systems
- Black River Systems Co.** *Software Engineer* **May 2015 - April 2021**
- ▷ Developed analytical software systems and investigated machine learning solutions for several government agencies
 - ▷ Interfaced directly with customers and directed engineering efforts, authored two successful contract proposals (\$1.1M total)
 - ▷ Received shareholder's award for technical work and for starting and leading an informal technical speaking series

Projects

- Indexes in the OP Platform** **Omega Point Research**
- ▷ Technical lead for an effort to integrate third-party equity indexes into the Omega Point data platform as first-class entities
 - ▷ Helped design app interfaces, developed PySpark code to apply risk models to 100M+ index, model, date combinations
- Portfolio Change Summarization using LLMs** **Omega Point Research**
- ▷ Proposed and led internship project to build a Python tool which uses LLMs to summarize changes in portfolio risk/return
 - ▷ After the initial prototype was built, I led the effort to integrate the new summarization service into the primary application
- Portfolio Testing, Optimization, and Construction** **ZAIS**
- ▷ Led the development of a Python web service which allows portfolio managers to test, optimize, and construct loan portfolios
 - ▷ Helped collect and merge requisite data from varied sources, implemented compliance tests based on legal documentation
 - ▷ Implemented linearly constrained greedy optimization approach based on Excel prototype, developed live data visualization
- Tenant Name Disambiguation** **Independent Consulting, Wells Fargo**
- ▷ Built a system to disambiguate tenant names in a dataset of commercial real estate leases (over 100k rows, no ground truth)
 - ▷ Researched approaches, built system around the Python Dedupe library, using clustering metrics to evaluate performance
- Simulation Model Refactoring, Performance Improvements** **ZAIS**
- ▷ Improved Monte Carlo simulation model by adding tests, fixing bugs, improving data access, and improving total runtime
 - ▷ 3x runtime improvement using line profiler and additional Numba, prototyped 250x improvement using 500 AWS λ functions
- Loan Implied Ratings Model** **Independent Consulting, ZAIS**
- ▷ Worked with SME to translate Excel model into Python app, sharing analysis with wider team. (CLI tool and Teams Bot)
 - ▷ Reverse-engineered process, developed a more efficient approach using a quadratic programming formulation of the problem
- Low SWaP Threat Detection System** **Black River Systems**
- ▷ Project lead for R&D of an edge computing system which applied deep learning techniques for signal ID and threat detection
 - ▷ Collected data, trained and tuned models (Keras, Ray, Docker), developed integrated inference app (Python, Redis, UDP)
- Software Improvement Effort** **Black River Systems**
- ▷ Expanded the quality, reliability, availability, and feature sets of a suite of legacy, multi-platform C++ desktop applications
 - ▷ Authored unit tests (Catch2), refactored complex code (C++), developed automated testing system (Java), led adoption of automated testing, GitLab CI, and Docker

Education

- University of MN Duluth** *M.S. Applied Mathematics, CS Minor* **May 2015**
- ▷ Studied under Teaching Assistantship and Chancellor's Fellowship, 20 credits of graduate level CS coursework, **GPA: 3.67**
- Bethany Lutheran College** *B.A. Mathematics* **May 2013**
- ▷ Graduated Magna Cum Laude with **in-major GPA of 3.8**, 2013 Student Body President, graduated in three years

Skills

Languages/Frameworks/Tools: Have worked in Python, Java, Scala, C, R, Perl, \LaTeX ([link to résumé src](#)); Flask, PySpark, Docker, git(Github: [EvanOman](#)), Gitlab/Github/Azure Devops CI, some Linux; Excited about Cursor, GPT/Claude, and MCP