

TECHNICAL SKILLS:

Preferred Languages	C#, Python, SQL, Javascript & Node.js, TypeScript
- .NET	.NET, EF Core & Dapper, Blazor & ASP.NET MVC, WPF, WCF, ExcelDna & OData, PostSharp & Fody
- Python	Poetry, Anaconda, Beacon, pip, pytest, pydantic
Preferred Environments	Visual Studio & MS Code with WSL, AWS, Azure DevOps, GitHub & GitLab
- AWS	S3, RDS & DynamoDB, Lambda, EKS, ECS, EC2, IAM, CloudWatch
Data Layers	SQL Server & DacPac, Redis, DynamoDB, Snowflake, Supabase
CI/CD & Infrastructure	Azure DevOps & Pipelines, GitHub, TeamCity, Jenkins, Terraform & Docker, npm & nvm, Vercel
Dev Tools & Utilities	Postman, Application Insights, Splunk, Swagger, ChatGPT & Cody, Jupyter & Polyglot, Bloomberg
Risk Management	Alpha/Beta, Pnl Attribution, Liquidity, Factor Analysis, Stress & Scenario Analysis, Bloomberg PORT
Generative AI & LLMs	OpenAI API, Ollama, RAG, Fine-tuning, HuggingFace, LangChain, PyTorch, Llama 2, Gemma, Claude

EDUCATION:

New York University

Lehigh University – Two Degrees

MS in Computer Science

BS in Computer Engineering, BA in Economics

DESIGNATIONS:

- **CFA Charterholder:** Shows a comprehensive financial knowledge base and dedication to professional achievement.
- **FRM:** Demonstrates specialized expertise in financial risk management principles and practices.
- **CAIA:** Enhances understanding of alternative investments, building on the foundational CFAI curriculum.

WORK EXPERIENCE:

- **03/24 - Present: Founder & Lead AI Developer @ Fedago** (Python, OpenAI, Ollama, PyTorch, Supabase, Vercel & Next.js)
 - Created a self-service platform for deploying generative AI branded solutions providing AI chat and data governance UIs.
 - Conceived and implemented a proprietary data governance framework to ensure data ownership, confidentiality, compliance.
 - Selected and enhanced Chatbot-UI, an open-source software (OSS), to integrate with model APIs and local LLMs via Ollama.
 - Integrated custom datasets using function calling and fine-tuning with OpenAI models, leveraging OpenAPI configurations.
 - Added self-service tools for Retrieval-Augmented Generation (RAG) and model fine-tuning using HuggingFace and LangChain.
- **07/22 - 03/24: Blackstone, VP** (Python & Poetry, C#, AWS, Terraform, Jenkins, Beacon, Identity Server)
 - Led a global team to replace BXCore, Blackstone's legacy framework, which is the backbone of all the firm's applications.
 - Developed an AWS cloud-native Python solution using Poetry and WSL to abstract ledger-specific trades and reference data.
 - Implemented a novel approach to dynamically import any data that solved a long-standing issue and broadened our abilities.
 - Overhauled our legacy authN/Z process which freed us from our dependency on BXCore and our centralized web portal.
 - Presented this solution to the architecture review board which served as a blueprint for other teams facing similar challenges.
 - Removed complex dependencies to streamline our local development environment, dramatically reducing onboarding time.
 - Led and presented a feasibility study using Beacon's dependency graphs, Gromit, to run economic waterfall calculations.
 - Prototyped and presented cloud-native Excel solutions to automate manual business workflows such as copying data.
 - Leading this team was about bringing out the best in each member to form a well-rounded team. By highlighting individual strengths and addressing development areas, I transformed an underperforming member into a unique asset for the firm.
- **06/19 - 07/22: Cohen & Steers, Alternative Data & Excel Dev** (C#, SQL, .NET Core, DevOps, Azure, Angular, Python)
 - Led a nimble front-office software development and quantitative team supporting over a hundred investment professionals.
 - Handled three major initiatives: building our data sciences, overhauling our Excel add-ins, and modernizing our quant apps.
 - **Alternative Data:** Built a comprehensive data sciences platform that became key in uncovering investment opportunities.
 - Real estate industries included international commercial and residential real estate, global infrastructure, and commodities.
 - Our system provided insights that were a step ahead of traditional sell-side research, setting new benchmarks in the industry.
 - **Technologies Used:** Introduced Excel and cloud-native solutions using PowerBI, power query editor and OData endpoints.
 - **Excel Development:** Rearchitected our Excel technologies, using ExcelDNA and migrating VBA to a SOA solution.
 - Improved Excel Add-In performance by up to 99% using a prefetched redis cache and SOA architecture.
 - This overhaul enabled us to transition from cumbersome manual processes to streamlined automations.
 - Created an OMS-agnostic workflow that continued working through the firm's migration from EZE Castle to Charles River.
 - Integrated with Bloomberg's Desktop API to run risk reports and BDL to download a predefined list of security prices.
 - **Quantitative Work:** Collaboration with the quantitative team was a key highlight of my tenure at Cohen & Steers. We successfully transitioned the quants' on-prem development environments to Azure DevOps utilizing build and release pipelines and workflows. This move not only ensured the maintenance of code quality and streamlined deployments but also made it easier to build and test our backend tasks written in Python's Anaconda and Angular via C# for frontend.

- **Team:** To help support my team, I created a 6-month rotational training program aimed at acclimating new team members to our diverse business needs and tech landscape. This program demonstrated our commitment to continuous learning and team growth, ensuring that our team was at the intersection of technological innovation and our business.
- **11/17 - 06/19: DataWarhorse, Risk Management & Data Sciences for Hedge Funds** (C#, SQL, ETL, Azure, Python)
 - Developed cloud-based financial software including market data, security master, portfolio construction, and risk management.
 - Leveraged our expertise and infrastructure to build bespoke solutions for hedge fund clients and their investors including:
 - Constructed a multivariate-hedge of a client's international portfolio to suit a FOF investor's market neutral risk profile.
 - Implemented a monte-carlo best-first search algorithm that uses structured randomness to optimize portfolio hedges.
 - Built cloud-based ASP.NET MVC website for client access and data entry, iOS and Android apps, and Alexa skills for voice.
 - Prototyped a virtual risk manager using Amazon Echo to answer clients' questions re their portfolio's risk and exposures.
 - Extended our ETL framework for unstructured alternative data including social media, eCommerce and crowd sourced sites.
 - Captured social media purges and food poisoning incidents to realize investable opportunities before the market moved.
 - Researched and added support for re-distributable international market data including fixed income and derivatives.
- **06/09 - 11/17: Tremblant, Risk and Software Developer** (C#, SQL, Python, Bloomberg API & PORT) - **NYC**
 - Created risk management and data warehouse system ("DW") used by everyone including OPs, traders, and analysts.
 - DW was praised by external risk consultants as "among the top of all hedge funds [200+] we have reviewed in 25 years".
 - Built risk lib including performance analytics and alpha/beta attribution, stress tests, factor analysis, liquidity calcs.
 - Expert at calculating and communicating equity risks including ratios, VOL, VaR (iVaR, marginal, component).
 - Designed and developed 3 user interfaces/UX: web for data entry, Silverlight for analysis, Excel add-in for power-users.
 - Created an intraday reporting engine that allowed power-users and OPs to configure and automate reports using Excel.
 - Extended DW to work on position, trade, and class levels; took in market data, security data, and user price targets.
 - Integrated with Bloomberg Desktop API and SAPI to import international market data and export positions to PORT PRU.
 - Created and sent rebalanced trade files to our EZE Castle OMS, and integrated with EZE's intraday API to update our analyses.
- **03/08 - 01/09: Blue Mountain Capital Management, Quantitative Strategist** (C#, WPF, WCF, SQL, F#) - **NYC**
 - Created full-stack software to optimize margin, calculate risk, and assign trades using WPF's M-V-ViewModel and WCF.
- **05/06 - 03/08: UBS Prime Brokerage – NYC**
 - Development Manager: managed front-end client technology team, championed MVC technology, lead interview process.
- **03/05 - 05/06: Sungard Trading Systems / Brass** – built DMA front-end in C#, trade execution back-end in C++.