Jacob Swe

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Experience

Polen Capital   New York, NY
AI Architect & Lead Data Scientist   Jul 2024 – Present
- Implemented custom frontend for LLM inference, growing to >150 users (75% of firm) and 60M tokens monthly
- Oversee all GenAI infrastructure and inference as well as all classical training and deployment on Kubernetes
- Develop agentic workflows including multi-tool and multi-agent frameworks for complex analysis and Q&A
- Write and deliver onboarding and training on AI to more than 200 attendees with high conversion to active user

Lead Data Scientist   Oct 2023 – Jul 2024
- Created strategic plan for enabling safe and cost-efficient LLM use for the firm, saving $100k over vendors
- Released framework and UI for user-customized agents with custom vector databases, tool use, and moderation
- Integrated natural language APIs for 25+ endpoints to enable chat-based access to the most important firm data

Senior Data Scientist   Dec 2021 – Oct 2023
- Lead the development of quantitative research Python package with 5 developers still used by all PM teams
- Stood up complex performance and risk platform with automated deployment from 3k+ monthly reports
- Orchestrated ongoing optimizations of investment idea generation frameworks using differential evolution

Data Scientist   Jul 2021 – Dec 2021
- Established a new data science practice, including architecture, training, deployment, and inference on Azure
- Worked with Portfolio Manager and Distribution teams to create and present 3+ client facing whitepapers
- Responsible for ongoing portfolio monitoring and PM idea analysis covering 8+ strategies across the firm

Data Analyst   Aug 2019 – July 2021
- Conducted >20 complex research projects based on client inquiries and research team hypotheses
- Supported ongoing portfolio analysis through onboarding to performance and risk monitoring practices

Summer Associate   Jun 2018 – Aug 2018
- Developed proof-of-concept attribution reporting system with end-to-end ETL, Data Engineering, and dashboards

Ascent Conference   New York, NY
Intern   May 2017 – Apr 2019
- Supported venture capital investing conference with general analytics, sales development, and research
- Generated and automated pitch deck creation for 90+ companies before each conference

NYU Stern – Management & Organizations   New York, NY
Research Assistant, Under Prof. Hegde   Feb 2016 – Apr 2017
- Systemically reviewed academic literature of similar studies of insider trading on FDA drug decisions
- Recreated old study of long-term funding trends in government creating previously unknown insights

Education

New York University – Stern School of Business   New York, NY
Bachelor of Science – Statistics, Computing & Data Science. Minor – Mathematics. 3.8/4.0   May 2019
Honors: Cum Laude, University Honors Scholar, Dean's List, D3 Diving Team Member

Volunteering

NYU Business Analytics Club   New York, NY
Mentor and Advisor   Aug 2019 – Present
- Offer professional mentorship to a class of freshman students each semester on career and academic direction
- Occasionally offer technical advice to teams of students conducting data science projects for startups

Skills & Interests

Development: Python, Pytest, SQL, Azure Functions
GenAI: OpenAI, Anthropic, LangChain, LangGraph
Data Science: AzureML, SKLearn, PyTorch, BERTopic
Computing: Kubernetes, Docker, Jupyter, Linux
Data: Pandas, Numpy, SQLAlchemy, Pydantic
Visualization: Seaborn, Matplotlib, Plotly

Azure: Azure Functions, Logic Apps, DevOps, Artifacts, Webapps, AI Studio, Azure Pipelines, VMs, Bicep
Topic Modeling: End to end topic modeling using BERTopic to dynamically index risk based on queries
Agent Development: Graph based multi-tool and multi-agent development for complex workflows and Q&A