Matthew Yang

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Education

University of Waterloo — Sep 2022 – Apr 2027
Bachelor of Computer Science & Finance — GPA: 3.96/4.0
- **Courses**: Operating Systems, Algorithms, OOP, Advanced Statistics & Probability, Financial Derivatives

Work Experience

Point72 Asset Management — Jun 2025 – Aug 2025
Software Engineering Intern | Flask, TypeScript, React — *New York, NY*
- Led the **rewrite** of a trade reconciliation platform to support a major macro trading system migration, eliminating technical debt and delivering a **UAT-ready system in under 6 weeks**
- Redesigned core database schema to simplify complex data relationships and developed a migration script to successfully transfer **millions of rows** of historical positions data in production
- Implemented caching layer with async database polling in **Flask API** for **80% latency reduction** in response times
- Modernized legacy **1,000-line** SQL stored procedures into **pandas**-based Python modules with test coverage

Onex — Sep 2024 – Dec 2024
Quantitative Developer Intern | Java, Python — *Toronto, ON*
- Developed an in-house **risk management system**, from raw data processing to deployment on **Microsoft Azure**, saving **$300,000 annually** by replacing a third-party service
- Engineered a scalable data pipeline in **Java Spring Boot** to process daily financial data from **7 vendors**
- Built quantitative analysis tools in Python to reveal **factor bias and timing patterns** from factor models
- Presented insights about portfolio factor risk monthly to **5 portfolio managers** overseeing over **$2 billion AUM**

University of Waterloo — Sep 2023 – Dec 2023
Teaching Assistant – CFM101 — *Waterloo, ON*
- Ran weekly tutorials to teach Python, statistics, and financial markets to **60 students** using real market data
- Marked assignments in which students developed arbitrage trading strategies across stock exchanges

Bank of America Merrill Lynch — May 2023 – Aug 2023
Software Developer Intern | Scala, C# — *Toronto, ON*
- Developed **middleware API service** in **Scala** to stream real-time payout calculations to a positions dashboard for **eSWAP**, an equity swaps trading platform processing over **$40 billion** in transactions annually
- Refactored API routes to decrease the average size of HTTP payloads by **85%** and improve error handling
- Worked with traders to implement quality of life enhancements to the dashboard using **C#** and **XML**

Projects

Equity Factor Model | *Python*
- Equity factor model on the S&P 1500 with a **Sharpe of 0.83** and **5.08% alpha over FF3** over a 5 year backtest
- Compiled over 200 fundamental, macro, and sentiment factors and used **cross-sectional regressions** with decay analysis to select 10 predictive factors to use in a market neutral long/short decile trading strategy
- Implemented **SVD dimensionality reduction** to address multicollinearity during Fama-Macbeth regression

Stockle | *Node.js, React, Python*
- playstockle.com is a full-stack stock market-themed web game currently in open Alpha testing
- Engineered a multi-threaded data pipeline in **Python** and **Node.js** to consolidate market data from NYSE/NASDAQ FTP servers and Yahoo Finance, reducing daily refresh time from **30** to **3** minutes

Makria | *Dart, Flutter, Python, Google Cloud*
- First-place hackathon winning app that integrates **NLP AI** into conference calls to detect when a user is mentioned

Technical Skills

Languages: Python, C++, Java, C, C#, JavaScript, TypeScript, Scala, Bash, SQL, R
Libraries and Frameworks: Flask, pandas, scikit-learn, React, Node.js, Next.js, Spring Boot, WPF .NET
Developer Tools: Git, Linux, SSMS, MongoDB, Docker, Kubernetes, AWS, Microsoft Azure, DataDog