Brayden K. Mi

NYU | Mathematics & Computer Science

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PERSONAL STATEMENT

Analytical and driven NYU student with a robust foundation in mathematics, computer science, and quantitative finance. Experienced in quantitative research, financial modeling, and predictive analytics. Proven ability in developing sophisticated models and algorithms, including deep learning and algorithmic trading systems, with significant improvements in forecasting accuracy and strategy performance. Effective communicator and leader dedicated to continuous learning and collaboration.

EDUCATION

New York University | B.A. Mathematics and Computer Science GPA: 3.8/4.0 | Expected Grad. Dec, 2026

- **Awards:** USACO Platinum, Point72 Cubist Hackathon
- **Relevant Coursework:** Theory of Probability, Mathematical Statistics, Stochastic Calculus, Algorithms, Fundamentals of Machine Learning, Artificial Intelligence, Predictive Analytics
- **Clubs:** Mathematical Finance Group, BUGS (Open-Source Club), NYU Math Society
- **Certificates:** Bloomberg Financial Fundamentals, Bloomberg Market Concepts, Bloomberg Spreadsheet Analysis, Bloomberg Environmental Social Governance

WORK EXPERIENCE

Pan Capital Management | *Trading & Quant Analyst Intern* May - Aug, 2025

- Developed pipeline algorithm to compile and upload market statistics, effectively decreasing time required by 99.4%
- Wrote and implemented algorithm to collect, cross-verify, and analyze PE, FX, and Commodity trader statistics
- Developing quantitative risk strategy for options based on implied volatility from Bachelier Call Options model

MD Anderson Cancer Center | *Data Science & Machine Learning Intern* May - Aug 2024

- Designed large-scale data processing pipelines for predictive analytics and clinical optimization.
- Developed deep learning models that improved medical imaging segmentation accuracy by 33.6%.
- Collaborated with multidisciplinary teams to build scalable ML pipelines for real-world clinical data.

Applied Math Lab, NYU | *Quantitative Research Assistant* Sept 2023 – May 2024

- Modeled asset pricing and volatility using ARIMA, LSTM, and stochastic simulations.
- Created Python-based backtesting tools for strategy evaluation across real asset and infrastructure-linked datasets.
- Analyzed macroeconomic and sector-specific trends for relevance to model performance.

Courant Institute of Mathematical Sciences, NYU | *Tutor for Data Structures* Sept 2024 - Present

- Led weekly office hours, advised students on recursion, algorithm design, and OOP.
- Designed hands-on exercises to bridge theory and implementation.

PROJECTS

AI-Driven Equity Trading System

- Built LSTM-based price prediction models for low-volatility equities (80% ROI in 6-month backtesting).
- Integrated real-time market feeds and automated execution via broker APIs.

Solar Power Generation Forecasting

- Developed Seasonal ANN (SANN) and sinusoidal regression models for long-horizon energy output forecasting.
- Achieved superior accuracy (NRMSE: 0.0395) over industry benchmarks (SARIMAX).

Medical Imaging Segmentation Toolkit (MIST)

- Engineered modular deep learning toolkit with custom loss functions (e.g., clDice) for clinical imaging.
- Optimized for GPU clusters to enable hospital-scale deployment.

Reverse-time Migration for USCT Imaging

- Adapted seismic wave-equation imaging from geophysics to ultrasound medical imaging.
- Improved diagnostic precision through enhanced depth reconstructions.

SKILLS and INTRESTS

Programming Languages: Python, Java, C++, SQL, JavaScript, Go, Rust, Julia

Financial & Strategy: Financial Modeling, Private Equity Research, Time Series Modeling, Backtesting,

Data & AIs: PyTorch, TensorFlow, NumPy, Pandas, Jupyter, Scikit-Learn

Visualization & Tools: Tableau, PowerBI, R, Excel, NetworkX, Bokeh

Cloud & DevOps: AWS, GCP, Azure, Docker, Apache Hadoop, Kubernetes

Interests: Texas Holdem Poker, Lifting, Rock Climbing, Swimming, Vinyl Records, Saxophone