

Jason Ie

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EDUCATION

Northeastern University | Boston, MA

Expected Graduation: May 2026

Bachelor of Science in Computer Science and Finance, Minor in Mathematics

GPA: 3.85/4.0

- **Relevant Coursework:** Object Oriented Programming, Algorithms and Data Structures, Artificial Intelligence, Software Engineering, Mathematics of Data Models, Networks and Distributed Systems, Database Design, Discrete Mathematics, Algorithmic and Robo Trading, Blockchain Applications
- **Clubs/Activities:** Huskies for Hoops, HackPrinceton, Disrupt - Northeastern's Fintech Initiative, Computer Science Mentoring Organization, Northeastern Quant-Finance Club, Kappa Sigma
- **Honors:** Dean's Scholarship, Dean's List

SKILLS

Languages: Python, Java, JavaScript, TypeScript, SQL, C#

Frameworks & Libraries: Node.js, React, Spring Boot, Express.js, Pandas, NumPy, Scikit-learn, PyTorch, ASP.NET

Databases & Cloud: AWS, GCP, MongoDB, DynamoDB, PostgreSQL

Tools & DevOps: Git, Jenkins, Docker, Kubernetes, Linux, TCP/IP, GraphQL, Claude Code

EXPERIENCE

Quantitative Research Assistant

Feb 2026 - Present

Northeastern University, D'Amore-McKim

Boston, MA

- Designed an algorithmic signal generation framework in **Python** and **Pandas** to exploit time-series and cross-sectional momentum, analyzing return auto-covariance and lead-lag effects across historical market data
- Constructed an automated feature-engineering and model-training pipeline with **Scikit-learn** and **PyTorch** to train **gradient boosting algorithms** for momentum signal generation, dynamically modeling for frictions like market impact
- Built a trading algorithm incorporating Mean Reversion, RSI, Ichimoku, and an ATR volatility gate, utilizing walk-forward backtesting to validate out-of-sample robustness and mathematically project a **45.6% CAGR** and a **1.37 Sortino ratio**

Software Engineer Intern

Jun 2025 - Aug 2025

Capital One

McLean, VA

- Architected backend for data usage and metadata governance using **Java Spring Boot** and **AWS DynamoDB**, accelerating executive-level compliance processes across enterprise operations to save **\$2M+** annually
- Automated **CI/CD pipelines** with **Docker** and **Jenkins** for containerized **LocalStack** environments, streamlining **Agile** workflows and reducing development setup time by **60%**
- Engineered a responsive frontend architecture with **React** and **TypeScript**, integrating **TanStack Query** for asynchronous state management and data caching to eliminate redundant network requests and accelerate UI rendering speeds

Software Developer Co-op

Jul 2024 - Dec 2024

enLabel Global Services

Boston, MA

- Led the end-to-end development of a client-facing **Next.js** and **React** registration portal to onboard **10,000+** users, implementing an **Express.js** middleware layer with **OAuth 2.0 (PKCE)** for secure Google Drive and Dropbox integrations
- Improved **SQL** queries and refactored stored procedures in **SSMS**, boosting average query execution time and overall system performance across a complex database with **1,000+** tables, serving **50,000+** active users

Software Engineer Intern

Dec 2023 - Apr 2024

SuperCare Health

Irvine, CA

- Optimized **data analysis** pipeline by introducing **webhook-based** event processing, reducing latency by **25%** and improving system responsiveness for critical patient data workflows
- Modernized the legacy fax system by integrating a solution with **MongoDB** and the **RingCentral API**, capable of managing over **20,000** faxed pages daily across patient communication channels

PROJECTS

Vera | Python, Gemini Vision, Vector Search

Feb 2026

- Orchestrated a multi-stage **computer vision** pipeline to automate fashion discovery, reducing manual user search time to seconds by chaining **Gemini Vision** with a **Segment Anything Model (SAM)** for precise object extraction
- Reduced product search latency by over **85%** by engineering a vector-based matching engine with an asynchronous **FastAPI** backend, **PostgreSQL/pgvector**, and scalable **CLIP image embedding** search

NU Sync | TypeScript, MongoDB, React

Mar 2025

- Built a real-time social networking platform with **MongoDB**, **TypeScript**, **Socket.io**, and **React**, supporting **100+** concurrent users with **sub-100ms latency** for instant friend connections and live messaging
- Developed Spotify-integrated music features with **OAuth** authentication, **RESTful APIs** for playlist sharing, and **Gemini AI** powered games, with CI/CD pipelines via **GitHub Actions** and deployment to **Render**