Ariel Miranda

Hoboken, NJ 07030

amiranda3@stevens.edu | 631.401.6884 | | http://www.linkedin.com/in/ariel-mir | https://github.com/hyt4

EDUCATION

Stevens Institute of Technology - *Cumulative GPA: 3.8*   Hoboken, NJ

Major: Bachelor of Science, Computer Science   Expected Graduation: May 2028

Minor: Quantitative Finance

Relevant Coursework: Data Structures, Algorithms, Computer Architecture and Operating Systems, Software Engineering, Intro to Quantitative Finance

TECHNICAL SKILLS/CERTIFICATIONS

Computer: Python, C++, Java, JavaScript, TypeScript, SQL, HTML, CSS, AWS, React, Flask, Node.js, Git, Firebase, Heroku, Linux/Unix

Certifications: Google Data Analytics Professional Certificate, Advanced Learning Algorithms, Supervised Machine Learning: Regression and Classification

EXPERIENCE

AIRS Fellowship – Stevens Institute of Technology   Hoboken, NJ

Machine Learning Researcher   May 2025 – Aug 2025

- Engineered Sentiment analysis pipelines with neural networks for financial prediction
- Benchmarked LLMs vs. traditional ML models on unstructured datasets
- Co-authoring a paper on explainability frameworks for high stakes AI predictions

Hanlon Financial Systems Center   Hoboken, NJ

SHIFT Research Assistant   Feb 2025 – Present

- Built and tested distributed algorithmic trading systems handling simulated market data across 10,000+ orders under stress-test conditions
- Designed simulations for order batching, latency, and scalability in Python
- Collaborated on DeFi/AMM arbitrage detection with multi-agent system modeling

Brookhaven National Laboratory   Upton, NY

Software Research Intern   May 2023 – Aug 2023

- Integrated a high-resolution digitizer into the EPICS-based control system at NSLS-II
- Automated testing workflows in Python, reducing QA time by 30% and improving reliability of control system integrations
- Collaborated in a cross-functional team to deliver scalable software enhancements

PROJECTS

Stock Portfolio Optimization Tool   Remote

Python, SQL   Jan 2024 – Present

- Built a Monte Carlo simulation engine projecting outcomes from historical asset data
- Achieved 95% uptime on API backend while handling 500+ daily portfolio optimization requests

AI-Powered Spreadsheet Assistant- Fast API   Remote

FastAPI, JavaScript, OpenAI API, AWS   Jun 2025 – Present

- Built a no-code spreadsheet assistant using FASTAPI and OpenAI API to automate Excel-like operations through natural language, improving user workflow speed by 40%.
- Implemented features such as intelligent formula suggestions, auto-completion, and custom workflow automation, improving user efficiency in data manipulation

Secure Log   Remote

FastAPI, JavaScript, React, AWS, PostgreSQL   Sep 2025 – Present

- Built a containerized full-stack encryption service using React, FastAPI, and PostgreSQL, enabling users to securely encrypt/decrypt payloads and access paginated searchable logs of past requests
- Implemented RESTful endpoints with UUID tracking, UNIX timestamps, and robust error handling for invalid keys or empty payloads.
- Deployed on AWS using Docker Compose with CI/CD linting pipelines, ensuring 100% workflow validation on each push.

LEADERSHIP & PROFESSIONAL DEVELOPMENT

SEO Career   New York, NY
SEO EDGE Participant   Sep 2025 – Present
- Receive coaching and online instruction to achieve targeted interview, technical, and professional developmental goals
- Learn business fundamentals to compete successfully for internship opportunities
- Complete industry-specific training and assessments focused on developing technical skills and institutional knowledge

Islip Animal Shelter   Islip, NY
Volunteer   Sep 2023 – Sep 2024
- Assisted in daily shelter operations and animal care, supporting adoption outreach and facility organization

Other Affiliations: ColorStack, Stevens Men's Club Soccer, Stevens Computer Science Club, Stevens Society for Artificial Intelligence

INTERESTS

Language : Fluent in Spanish
Other: Artificial Intelligence, Cloud Computing, Algorithmic Trading, Soccer, Startups, Volunteering, Music, Technology for Social Good