Cavin Gada

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EDUCATION

Stevens Institute of Technology **Hoboken, NJ**
Bachelor of Science in Computer Science, Minor in Quantitative Finance *Expected May 2024*

- **GPA**: 4.0/4.0 | **Awards:** Dean's List, Edwin A. Stevens Scholarship, Presidential Scholarship, Bloomberg Certified
- **Relevant Coursework:** Computer Architecture, Data Structures, Algorithms, Systems Programming, Databases, Intro Quant. Finance, Risk Management, Machine Learning, Deep Learning

SKILLS

Software: Git, Bitbucket, Linux Command Line, MobaXTerm, Putty, Bloomberg Terminal, Jira, Confluence
Frameworks & Skills: Pandas, Numpy, Keras, Scikit-learn, Elasticsearch, Logstash, Kibana, Node.js, Express, MongoDB
Languages & Programming: Python, Java, C++, C, Bash, R, JavaScript, HTML, SQL

PROFESSIONAL EXPERIENCE

JPMorgan Chase & Co. **Jersey City, NJ**
Software Engineering Intern, Markets Technology *Jun 2023 – Aug 2023*

- Designed and developed an Elasticsearch and Logstash service that assists clients in resolving application issues by parsing and conglomerating over 10GB of daily real-time BondStudio application logs at over 20,000 logs per second.
- Utilized Kibana to build visualizations, allowing the firm to detect anomalies in the application log patterns.
- Employed MobaXTerm to efficiently manage remote machine servers and host a robust multi-node Elasticsearch cluster, bolstering the service's resilience/scalability and ensuring seamless data management/retrieval.
- Eliminated the need for costly software licensing, saving the firm over $36,000 in annual expenses.

Stevens Student Managed Investment Fund **Hoboken, NJ**
Quantitative Risk Analyst *Jan 2023 – Present*

- Developed a stress testing framework using Monte Carlo simulations to evaluate the fund portfolio's volatility, resilience, and performance in response to equity price fluctuations, resulting in enhanced risk management.
- Implemented a python script that updates missing S&P500 equities adjusted close prices to the fund's historical data at a 500% more efficient rate than previous implementations.
- Collaborated closely with equity analysts to assess the risk associated with purchasing a variable amount of an equity for a $600,000 portfolio, leveraging a wide range of quantitative metrics (i.e., Yearly VAR/CVAR, Sharpe and Sortino ratios, Monthly Volatility, Beta, etc.)

MEMX (Members Exchange) **Jersey City, NJ**
Software Engineering Intern, Server Development *Sep 2022 – Dec 2022*

- Integrated a new server endpoint into the memxtrading.com platform that retrieves members' market-data settings (circuit name and top, depth, or last market-data).
- Implemented server-side custom express-validators for EDX-specific data, including Crypto Participant Identifiers (CPIDs), Price Controls, 'Clearing' Drop Ports, etc. to prevent incorrect request bodies from crashing the platform.
- Migrated the Regulatory Tool's PostgreSQL database methods to Knex.js, bolstering the exchange's flexibility in implementing new database management systems.

Software Engineering Intern, Core Development *Jan 2022 – May 2022*

- Developed backend software that processes add, delete, and reduce orders at a consistent rate of over 1 million msg/s.
- Built a tree-map structured order book (with sorted bid/ask price levels and market depth data) given real-time exchange order messages and implemented JUnit testing to verify the tool's accuracy.
- Programmed a webpage (using Node.js and express) that displays the exchange's top of book bid and ask quotes for a user-inputted symbol and updates every one second.
- Wrote software to decode FIX-encoded execution reports (DROP), which enables the exchange to better assist clients.

PROJECT & PROGRAMMING EXPERIENCE

Facial Reconstruction

- Analyzed 157 face images and reconstructed the remaining 20 using eigen decomp. and principal component analysis.

Iris Neural Network

- Built a neural network that implements 'n' hidden layers and 'k' nodes to predict whether an Iris plant is "Setosa," "Versicolor," or "Virginica" based on its sepal length, width, and height.
- Reprocessed the flower data to fit the model standards and implemented forward/backward propagation (using the sigmoid activation function) from scratch (i.e., without training libraries)