

# Jacob Ball

Aspiring Data Scientist | Machine Learning Engineer | Security Clearance: SECRET (Inactive)

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## Education

**Fordham University** - Bronx, NY

**GPA 3.89**

Bachelors of Science in Information Technology & Systems

*Expected May 2026*

Masters of Science in Data Science (Concentration: Machine Learning)

*Expected May 2027*

- Relevant Courses: Database Applications (SQL), Algorithms for Data Science (Python), Computer Science I & II (OOP, C++), Data Structures (C++), Statistics I, Database Systems (SQL/PostgreSQL)
- **Academic Year 2024 - 2025 Deans List**

## Experience

**Westchester Country Club** - Rye, NY

May 2024 - Oct 2025

*Security Officer (Problem Solving, Attention to Detail, Communication, Time Management)*

- Improved operational efficiency by designing and implementing new patrol logging procedures, reducing reporting time, and increasing data visibility across the security team.
- Demonstrated strong interpersonal and communication skills by addressing member concerns professionally, managing competing priorities, and maintaining high standards under pressure

**Marine Corps** - Okinawa, Japan | Corporal

Jul 2019 - Jul 2023

*Network Administrator (Linux, IT, Cybersecurity, Leadership, Continuous Improvement)*

- Designed and maintained local and campus area networks, ensuring 99.999% uptime for over 100+ users during critical operations. Demonstrated the reliability and composure for high stakes data infrastructure.
- As Platoon Network Chief, spearheaded IT operations for the Balikatan 2023 exercise, deploying LAN infrastructure to support over 200+ personnel.
- Improved network efficiency by automating routine administrative tasks, **reducing configuration time by 30%** using scripting.

## Projects

**Stock Market Data Pipeline & Prediction Model** [\[Link\]](#)

Dec 2025

*Personal Project (Python, Scikit-learn, Pandas, Time Series Analysis, Data Ingestion)*

- Built an end to end data ingestion pipeline using the yfinance API to collect and normalize historical market data, implemented automated data transformation and cleaning workflows using pandas
- Built Random Forest classifier with backtesting engine **achieving 55.7% precision** across 9000+ historical trading days, and implemented train-test splits to prevent data leakage.

**Directed Weighted Graph with Breadth-First Traversal**

Nov 2025

*Data Structures (C++, Graph Theory, STL, Dynamic Memory, Algorithm Implementations)*

- Implemented a directed weighted graph ADT using adjacency matrix representation with dynamic 2D arrays, supporting vertex/edge operations and graph traversal algorithms.
- Developed breadth-first traversal algorithm using STL queue and vertex marking system, **achieving  $O(V+E)$  time complexity** for efficient graph exploration across 7+ vertices and 9+ weighted edges

## Technical Skills

**Programming & Tools:** Python, SQL, C++, Git, GitHub, Linux, Javascript, HTML

**Data Analysis:** Pandas, NumPy, Applied Statistics, Data Modeling, Data Wrangling, Data Ingestion

**Machine Learning:** Classification, Regression, Clustering, Time Series Analysis, Anomaly Detection, PyTorch

**Visualization:** Tableau, Matplotlib, Seaborn

**IT & Networking:** FortiGate Firewalls, Cisco Call Manager, LAN/WAN setup and maintenance

**Soft Skills:** Leadership, Communication, Continuous Improvement, Troubleshooting, Self Starter, High Standards