Dylan Spektor

spektordylan@gmail.com | Boulder, CO

EDUCATION & HONORS

University of Colorado Boulder **Expected: May 2027**

B.S. Computer Science and B.S. Applied Mathematics

- **GPA:** 4.0
- **Extracurriculars**: CU Quants, Engineering Honors Program, Tau Beta Pi, Quantum Scholars, HackCU
- **Relevant Coursework:** Advanced Data Science, Software Development Methods, Algorithms, Probability and Statistics, Numerical Methods and Scientific Computing.

Colorado Early Colleges Douglas County North **May 2025**

A.S. Computer Science (Dual Enrollment at Arapahoe Community College)

- **GPA:** 4.85/4.0
- **Relevant Coursework:** Computer Architecture/Assembly Programming, Multivariable Calculus, Differential Equations & Linear Algebra.
- **Honors & Awards:** 1580 SAT, National Merit Finalist, top 5% rank, CyberPatriot Platinum Tier Competitor.

EXPERIENCE

CU Quants Fund **October 2025**

Quantitative Developer

- Build and optimize high-performance trading infrastructure, developing robust systems for strategy execution, market data processing, and real-time risk monitoring.
- Perform data analysis on historical orderbook data, modeling spread of stablecoin assets to identify market making opportunities. Target liquidity provision for large institutional flow outside immediate top-of-book.
- Explore cross-correlation analysis to identify leader-follower relationships in cryptocurrency markets.
- Apply convex optimization to solve for optimal capital allocation across pairs trading strategies.

AIR Communities **June 2023 – June 2025**

IT Service Technician Denver Tech Center

- Remote tech support for employees of nation-wide luxury apartment portfolio. Assist with account lockouts, password resets, and other technical issues. Manage business portal as system admin.
- Perform asset management, setting up phones and leading an effort to wipe 150+ retired devices for donation.
- Created custom recovery keys for unsupported Surface laptop models in Windows 11 update project.

PROJECTS

Virtrade (Paper Trading Web Application) **April 2026**

- Collaborated in an agile team to build a full-stack paper trading platform using Node.js/Express, Python/Flask microservices, and PostgreSQL, containerized with Docker Compose. Integrated real-time financial market data APIs to render interactive candlestick charts, and built a responsive UI with Bootstrap 5 and session-based user authentication. Wrote unit and integration tests and contributed through Git-based code review.

  Skills: Full-stack development, microservices architecture, Git/version control, REST APIs, testing

Perovskite Solar Cell Research **Aug 2025 – Dec 2025**

- Created research proposal to analyze effect of transport layer application method on cell efficiency degradation. Performed bootstrap resampling of degradation time series within measurement uncertainty, and refit models to generate parameter distributions, demonstrating statistically significant differences in degradation rates.

  Skills: Python (pandas, numpy, matplotlib, scipy), statistical modeling, numerical algorithms, data manipulation

Chemical Inventory Management System **Jan 2024 – May 2024**

- Built a desktop application from scratch for laboratory chemical inventory tracking, with search/filter, audit generation, multi-window concurrency, UI customization, and persistent file storage. Designed using JavaFX, with a focus on robust error handling and technical documentation.

  Skills: Object oriented Java, technical writing, UML diagrams, system design