

Cayde Bruce

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EDUCATION

The University of Chicago

Bachelor of Science in Computer Science

Cumulative GPA: 3.79/4.00

Chicago, IL

Expected, June 2025

EXPERIENCE

Sound Point Capital

Quantitative Development Intern

New York, NY

June 2024 – August 2024

- Engineered an evolutionary algorithm for automating the neural network model hyperparameter tuning process, eliminating qualitative guesswork, saving 160 man-hours annually, and increasing accuracy by an average of 6%.
- Formulated a sophisticated linear transformation model for industry diversification, integrating it into the internal trade package optimizer, which enhanced portfolio diversification metrics by 4%.
- Built an automated web scraping and fuzzy matching system to automatically add missing fields to our internal SQL loan database, eliminating the need for manual data entry and saving \$20,000 annually.
- Engineered a multi-objective linear optimization feature into the trade optimizer platform using python, significantly enhancing decision making capabilities, reducing the time needed to formulate trade packages by 2 hours per week.

Argonne National Laboratory

Machine Learning Research Intern

Chicago, IL

June 2023 – September 2023

- Conducted quantitative analysis and employed data visualization to evaluate and improve the performance of neural networks, implementing recommendations and achieving an 11% increase in lab model baseline accuracy.
- Designed, applied, and optimized neural network architectures using PyTorch and SpikingTorch, contributing to advancements in neuromorphic computing, culminating in the publishing of a scientific paper on neural networks.
- Led and developed training sessions for 14 scientists across 3 teams on best practices in training neural networks, improving the lab's capacity for efficient model performance and streamlining on boarding for new team members.

Valqari

Software Engineer Intern

Lombard, IL

June 2022 – September 2022

- Developed and administered cybersecurity plans to ensure the security of computer files, design plans, and proprietary software, against unauthorized access to achieve an overall 98% company compliance rate.
- Implemented a multilayered security system for Valqari products including integrating two factor authentication, enhanced password security policies, and physical controls, increasing sales by 33%.
- Designed SQL database, improving scalability, enabling full chain of custody, establishing integration with tech stack, resulting in a 13% decrease in drone take-off time and enabling company to courier sensitive packages.

United States Air Force

Information System Security Manager

Mildenhall, England / Hurlburt Field, FL

December 2019 – August 2021

- Developed a Python script automating the verification of administrators by processing CSV files and cross-referencing with existing records, significantly reducing manual efforts, and saving 730 man-hours annually.
- Directed 3-person simulated adversary team in simulated e-mail phishing attacks and penetration testing resulting in the identification and the elimination 464 security deficiencies.

Cyber Security Technician

August 2017 – December 2019

- Encrypted communications for 1,200 flights by overseeing \$2.8 million inventory of communication security equipment through the ordering, controlling, and distribution of all cryptographic keys used on aircraft.
- Protected network from insider threats by overseeing 730 System Administrators, verifying compliance with Department of Defense training, NIST, ensuring legal practices through quarterly audits and inspections.

SKILLS

Programming Languages: Python, C, C++, JavaScript, Rust, Haskell, SQL, PowerShell

Tools: Git, Unix/Linux, AWS, NumPy, PANDAS, PyTorch, Jupyter, Docker, Azure

Certifications: Secret Clearance, CompTIA Security+, Department of Defense: Risk Management Framework