# Conner Rose

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## Education

**University of Michigan**, *Ann Arbor, MI* **Expected May 2026**

*B.S.E. and M.S.E. in Computer Science, Completing Requirements for B.S. in Honors Mathematics* *GPA: 3.80/4.0*

- **CS Coursework**: Data Structures and Algorithms, Discrete Math, Machine Learning, Computer Organization, Computation Theory, Web Systems, Advanced Operating Systems, Formal Verification of Systems Software
- **Mathematics Coursework**: Calculus I-IV, Linear Algebra, Combinatorics and Graph Theory, Probability, Real Analysis, Graduate Probability Theory, Advanced Linear Algebra, Discrete State Stochastic Processes

## Experience

**IMC Trading**, *Chicago, IL* **June – August 2025**

*Incoming Software Engineering Intern*

**Bloomberg L.P.**, *New York, NY* **June – August 2024**

*Software Engineering Intern – Enterprise Data, Index Core Data*

- Designed and implemented dependency resolution and automated testing tool using **Python**, used by team of **80 engineers**, reducing turnaround time when modifying bond formulas in distributed calculation engine
- Expanded testing coverage from single-field to end-to-end, identifying existing bugs in calculation pipeline, and preventing bugs from being introduced that would not have been identified previously, resulting in more robust system
- Designed and implemented formula modification user interface using **React**, allowing developers to modify bond dependency and calculation configuration files, validate their modifications, while monitoring downstream affects

**Traders At Michigan**, *Ann Arbor, MI* **September 2023 – Present**

*Head of Software Engineering*

- Lead development of ETF trading game, played at UMich Trading Competition by ~100 competitors simultaneously
- Design and deliver advanced SWE curriculum to club members, supporting their SWE interview and career preparation

**Bloomberg L.P.**, *New York, NY* **May – August 2023**

*CTO Office Intern – Compute Architecture and OSPO*

- Designed automated access revocation system using **Python** and **LDAP**, deployed to **Docker**-containerized **Jenkins Pipeline**, ensuring appropriate removal of inactive accounts from Bloomberg's open-source GitHub repositories
- Developed GitHub crawler using **Python** to scan all projects contributed to by Bloomberg employees over 10 years, automating contribution cataloging and open-source license compliance verification, increasing audited projects by **3x**

## Projects

**Zinger's (ETF Trading Game)** **March – July 2024**

*C++20, JavaScript, React, Websockets, Multithreading*

- Architected ETF Trading Game, utilizing **websocket**-based infrastructure, enabling real-time data and order matching
- Developed **multithreaded** matching engine in **C++**, capable of handling **4M orders** in < **3 seconds** across 4 assets
- Implemented backend server using **$\mu$WebSockets** integrated with matching engine, capable of sub **0.1ms 99% latency**

**IMC Prosperity 2 (Global Trading Competition)**, *Python* **April 2024**

- Utilized ETF arbitrage, pairs trading, game theory simulations, and other strategies to place 53rd of 9,140 (**top 0.58%**)

**Historical Landmark Image Classifier** **October – November 2023**

*Python, PyTorch, Pandas, NumPy, Matplotlib, Computer Vision*

- Designed and implemented **convolutional neural networks** for multiclass image classification of historical landmarks
- Researched **model architecture** and **data augmentation**, employing subsampling and noise generation to improve accuracy and mitigate overfitting while training model with 5 convolutional layers and **+2,000,000** parameters

## Technical Skills

**Languages**: C++, Python, JavaScript/TypeScript, HTML/CSS, SQL, LaTeX

**Tools**: Linux, Git, Docker, Jenkins, Django, React, PostgreSQL, MongoDB, Pandas, NumPy, (Neo)Vim, Tmux