

# 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: 3.75/4.0

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

## 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

Network File Server

December 2024

C++20, Boost, Multithreading, Socket Programming, File Systems

- Designed and implemented **highly-concurrent** network file system in modern C++, using **Boost** upgradeable reader-writer locks for increased concurrency, while guaranteeing disk consistency

Operating System Kernel, C++20

October - November 2024

- Designed and implemented **virtual memory manager** in modern C++, capable of servicing concurrent malloc requests
- Wrote a threading library in C++, including **threads**, **mutexes**, and **condition variables**, with **multi-core** CPU support

Zinger's (ETF Trading Game)

March – July 2024

C++20, TypeScript, 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 **µWebSockets** integrated with matching engine, capable of sub **0.1ms 99% latency**

## COMPETITIONS

University of Michigan Collegiate Poker Tournament

October 2024

- Placed 4th of 108 students from universities across the country, securing \$500 in prize money

IMC Prosperity 2, Python

April 2024

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

## TECHNICAL SKILLS

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

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