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# Advay Muchoor

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# EDUCATION

### University of Michigan, College of Engineering

Ann Arbor, MI

B.S.E. in Computer Science; GPA: 3.92/4.00

Sep 2019 - Apr 2023

- Courses: Operating Systems (EECS 482), Distributed Systems (EECS 491), Compiler Construction (EECS 483), Networks (EECS 489), Applied GPU Programming (EECS 471), Machine Learning (EECS 445)
- Honors and Awards: Dean's Honors List, EECS Scholar, Two-Time MSAS Hackathon Winner

## Work Experience

Five Rings Capital New York, NY

Software Developer

Aug 2023 - Present

• Developing trading software in C++ on Linux

Citadel Securities Chicago, IL

Software Engineer Intern

June 2022 - Aug 2022

- Low Latency Team: Worked on the strategy behind a low latency trading system running on specialized hardware
- Alpha Research: Developed a gradient boosted tree model to better predict price changes, augmented research pipeline to support the ingestion of new data, and monetized model to yield increase in P&L

NVIDIA Santa Clara, CA (Remote)

Software Engineer Intern

Jan 2022 - April 2022

- Performance Sweeps: Assisted NVIDIA's industry leading submission to MLPerf-Inference 2.0 by running performance sweeps across different machines and modifying configurations to yield a 20% increase in perf per watt
- Triton Harness Design Proposal: Proposed new design to unify duplicate Triton Harnesses, resulting in 1000+ saved lines of code and a more maintainable and clean class structure
- Triton Harness Implementation: Implemented Unified Triton Harness using modern C++ 17 features, created team-wide C++ style guide, and verified that new harness had no performance regressions

**Belvedere Trading** 

Chicago, IL (Remote)

June 2021 - Aug 2021

Software Engineer Intern

- Exchange Simulator Optimization: Identified bottlenecks in exchange simulator and developed solutions in React and Python that reduced startup time from 15 min to 60 sec and memory usage on startup from 5GB to 600MB
- Thread Usage Refactor: Refactored C++ code that used proprietary busy-looping High Priority Threads to instead use thread-safe concurrent processing queues and an event driven architecture

#### Campus Experience

# U of M EECS Department

Ann Arbor, MI

Instructional Aide, EECS 482: Operating Systems

Aug 2021 - Apr 2023

- Course Topics: Covered topics such as multithreading, virtual memory, file systems, and networking
- **Teaching:** Wrote exams, designed discussion curriculum, held weekly discussion sessions, answered questions on online class forum, held office hours, and administered lecture as longest-tenured student staff member

#### U of M Athletic Department

Ann Arbor, MI

Software Developer

Aug 2018 - Dec 2020

• Dashboard: Created interactive dashboard that allowed teams to locate significant trends in player wearable data and incorporate analytics in daily protocols, laying groundwork for future tech integration within Michigan Athletics

#### Projects

Pursu: Developed an automated email analysis tool that helped 100+ students manage their recruiting journey

Operating System Projects: Created thread library, virtual memory pager, and networked file system using C++

SKILLS

Languages: C++, Python Technologies: Flask, AWS