

# Anant Matta

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## Education

### University of Illinois Urbana – Champaign

Expected May 2025

B.S. in Mathematics & Computer Science

GPA: 3.98/4.00

**Honors:** LAS James Honors Scholar, Dean's List

**Coursework:** Algorithms, Formal Development Methods, Graph Theory, Trustworthy Machine Learning, Applied Machine Learning, Programming Languages & Compilers, Numerical Analysis, Computer Systems

## Experience

### Software Development Intern

June 2024 – August 2024

*WH Trading LLC*

*Chicago, IL*

- Devised new historical database, reducing disk usage 50% while improving throughput 500%
- Built pipeline to integrate settlement data from new exchanges into trading and back-office systems
- Architected proprietary C++ client library for PostgreSQL and TimescaleDB for trading software
- Implemented real-time safety mechanisms for trading algorithms to ensure execution stability

### SPIN Research Intern

August 2023 – May 2024

*National Center for Supercomputing Applications*

*Urbana, IL*

- Designed a near real-time system to analyze behavior of wireless signals in indoor environments
- Evaluated SionnaRT for reactive ray-tracing simulations, reducing simulation time by 35%
- Generated synthetic dataset of wireless signal interactions to train machine learning models
- Presented research on wireless signal propagation at the NCSA Student Research Conference

### Course Assistant (CS 437 - Topics in IoT)

August 2023 – December 2023

*University of Illinois Department of Computer Science*

*Urbana, IL*

- Developed and adapted labs to demonstrate the principles of signal processing and FMCW radar
- Led weekly office hours to help students with midterm projects and troubleshooting labs

### Undergraduate Research Assistant

January 2023 – Present

*Wireless, Sensing, & Embedded Networked Systems (iSENS) Lab*

*Urbana, IL*

- Designed millimeter-wave retroreflectors for extreme mobility and non-line of sight scenarios
- Improved localization of retroreflectors by 50% through reengineered pre-processing and filtration
- Optimized design of retroreflector for use underground in low-power soil monitoring systems

## Organizations

### ACM @ UIUC, Infrastructure Team Lead

August 2024 – Present

- Managed an infrastructure team for UIUC's largest computer science student organization
- Coordinated integration of physical storefront with Stripe and custom embedded hardware

### Association for Quant Trading Education (AQTE)

August 2024 – December 2024

- Investigated the potential of deep learning models in high-frequency trading applications

## Projects

### Wireless Signal Visualization | Unity, Python, C

Built mixed reality (XR) application to detect and visualize wireless signal communications in real time

### iPlanner | MongoDB, Spring Boot, React, Typescript

Developed web application to allow college students to intelligently design 3/4-year academic plans

## Skills

**Languages:** C++, C, Python, Java, SQL, JavaScript, TypeScript, OCaml

**Other:** MySQL, PostgreSQL, Timescale, Qt, React, Unity, Flask, PyTorch, TensorFlow, Git, AWS, Docker