# Anant Matta

anantmatta.github.io | linkedin.com/in/anant-matta/

## 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** — August 2024 – December 2024
- Investigated the potential of deep learning models in high-frequency trading applications

## Projects

**Wireless Signal Visualization** | Django, Redis, Celery, Unity, Python, C, C#
Built mixed reality (XR) application to detect and visualize wireless signal communications in real time

**iPlanner** | MongoDB, Spring Boot, React, Typescript, Java
Developed web application to allow college students to intelligently design 3/4-year academic plans

## Skills

**Languages:** C++, C, Python, C#, Java, SQL, JavaScript, TypeScript, OCaml
**Other:** MySQL, PostgreSQL, Timescale, Qt, React, Django, Redis, Flask, PyTorch, TensorFlow, AWS, Docker