

# Uday Goyat

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## EDUCATION

### Georgia Institute of Technology

Atlanta, GA

B.S/M.S. Computer Science, GPA: 3.96, Faculty Honors

August 2022 - December 2025

**Selected Coursework:** Computer Systems, Networking, Data Structures & Algorithms, Database Systems, Probability Theory

## PROFESSIONAL EXPERIENCE

### Jane Street

May 2025 – August 2025

Software Engineer Intern

New York City, NY

- Built deterministic replay system called MORP, which processes **500K+ submissions/hour**, enabling regression tests
- Made MORP deterministic by snapshotting metadata and syncing execution state to catch booking diffs via replays
- Developed webs-slack-alerter to push real-time trading alerts to Slack, boosting desk visibility and response speed
- Designed generic-webs-subscriber for stateful subscriptions to live data from Jane Street's Excel-like systems

### NVIDIA

September 2024 – November 2024

Software Engineer Intern

Santa Clara, CA

- Simulated GPU chips in C++ on the Architectural Modeling (AModel) team responsible for debugging and testing.
- Utilized template meta-programming in C++ to inline virtual function calls, increasing Amodel speed **upto 15%**.
- Implemented a load-balancing algorithm for NVIDIA's Blackwell and Hopper GPUs, passing **300+ directed tests**.
- Developed C++ infrastructure to support **2000+ configurable "knobs"** for GPU architecture settings.

### Ramp

May 2024 – August 2024

Software Engineer Intern

New York City, NY

- Implemented support for **1.0%** cashback on Ramp's cards, increasing client acquisition and customer base.
- Reduced approval latency for new businesses on Ramp, enabling **5% in-session** auto-approvals post-application.
- Identified **106** potential delinquent businesses before onboarding for Ramp's services, **preventing \$100K+** in fraud.
- Developed API endpoints to identify and correct potentially transaction mislabels with **93%** accuracy.

### MathWorks

May 2023 – August 2023

Software Engineer Intern

Boston, MA

- Created testing framework to run **6000+ tests** which resolved 40+ critical bugs concerning visual signal data in Simulink.
- Added automation tools like dragging, clicking and visual result verification to the internal **JavaScript** testing framework.
- Designed a **scalable** web app to visually verify **45,000** signal data points, check the test statistics, and report failed tests.

## PROJECTS

### True Random Number Generator | [github.com/udaygoyat45/trng](https://github.com/udaygoyat45/trng)

April 2025

- Uses MBed microcontroller coupled with avalanche breakdown to provide an API to generate truly random numbers.

### DockTrack | [github.com/udaygoyat45/docktrack](https://github.com/udaygoyat45/docktrack)

December 2024

- An OCaml-based GitHub plugin that ensures documentation remains up-to-date by tracking features.

### TaskWeaver | [github.com/udaygoyat45/uday-multiagent](https://github.com/udaygoyat45/uday-multiagent)

March 2025

- Developed a multi-agent web automation system capable of executing multiple tasks in parallel from a single prompt.

## AWARDS & PUBLICATIONS

### Journal of Quantitative Description: Digital Media

April 2025

1st author for article, "The President is Dead: How Oppression Motivates Rumor Adoption" (WIP)

### International Society for Music Information Retrieval Conference

December 2022

Presented paper titled, "Teach Yourself Georgian Dataset: A Corpus Of Traditional A Cappella Vocal Polyphony"

### Fung Excellence Scholarship

April 2025

Selected for the Fung Excellence Scholarship as part of the MEng EECS program.

### Hacklytics 2024

February 2024

Placed **2nd** in Traversaal.ai track out of **1000+ students** in the largest data science collegeiate hackathon.

### MathWorks Math Modeling Challenge

April 2022

Placed **3rd overall** out of **600+ papers** submitted, presenting the research at Jane Street to NYU professors.

## SKILLS

**Languages:** Python, JavaScript, TypeScript, C++, MATLAB, Rust, OCaml, SQL

**Developer Tools:** Git, Unit Testing, Relational Database, Postman, Azure, AWS, Docker, QA

**Libraries:** OpenGL, OpenCV, Pandas, NumPy, SciPy, Matplotlib