Uday Goyat

941-914-8849 | udaygoyat45@gmail.com | udaygoyat.github.io | github.com/udaygoyat45

Education

Georgia Institute of Technology Atlanta, GA

Bachelor of Science in Computer Science, GPA: 4.0, Faculty Honors *Expected Graduation: May 2025*

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

Professional Experience

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.

Research

Technologies and International Development Lab August 2022 – Present

Research Assistant *Atlanta, GA*

- Webscraped **10 million+** comments on Twitter using BeautifulSoup and Scrapy to gain insights into an online narrative.
- Utilized **BERT models** for topic modeling, sentiment analysis, and graph algorithms to identify 7 narrative proponents.

New College of Florida June 2020 – June 2022

Reserarch Assistant *Sarasota, FL*

- Utilized **PortAudio, Armadillo (C++), NumPy, and Scipy** to implement 5 pitch detection algorithms.
- Generated annotated pitches with **98% accuracy** for over **960 minutes** of vocal ensemble music.

Projects

SummarEase November 2023

- Used advanced web scraping techniques to navigate anti-bot systems and efficiently extract data for research purposes.
- Implemented a Python **Llama.cpp** server with Vicuna models to perform comprehensive content summarization.

Voxel Engine | *OpenGL, Direct3D, C++* January 2024

- Engineered a Voxel Engine employing **OpenGL and Direct3D**, integrating advanced features such as model loading, real-time rendering, and interactive GUI elements for a comprehensive 3D graphics experience.

LiDarLink (HackGT) October 2023 – November 2023

- Developed LiDarLink, an innovative iOS app utilizing **SwiftUI, Apple's Room Plan API, and AWS S3** integration.
- Created an intuitive interface for LiDAR technology, using **Apple Room Sense** for real-time 3D environment creation.

Awards & Publications

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++, Java, MATLAB, Rust, GLSL, HTML, CSS, SQL
Developer Tools: Git, Unit Testing, Relational Database, Postman, Figma, Azure, AWS, Docker, QA
Libraries: OpenGL, OpenCV, Pandas, NumPy, SciPy, Matplotlib