

EDUCATION

Georgia Institute of TechnologyAtlanta, GA

B.S./M.S. in Computer Science, GPA 3.75May 2026 (Expected)

- Concentrations:** Systems & Architecture, Information Internetworks
- Courses:** Algorithms, Systems & Networks, Probability & Statistics, Machine Learning, Data Structures, Multivariable Calculus, Linear Algebra, Discrete Mathematics, Computer Architecture, Operating Systems, Databases, Real-Time Systems

WORK EXPERIENCE

Uber – Knowledge PlatformSunnyvale, CA

Software Engineering InternMay 2024 – August 2024

- Fine-tuned a large language model with retrieval augmented generation, optimizing hyperparameters and enhancing prompts with a 2,700-acronym dictionary to achieve 97% accuracy in feature name recognition.
- Wrote an Apache Spark job to automatically add LLM-generated descriptions for over 2,100 YAML files, leveraging the Hadoop Distributed File System (HDFS) for scalable, remote data storage.
- Implemented a synchronous gRPC gateway in Java to interface with the LLM and created a Python and PHP code linter to backfill 20,000+ descriptions with 5-second API call latency.

Uber – Earner Delivery RiskSunnyvale, CA

Software Engineering InternMay 2023 – August 2023

- Created a distributed data streaming pipeline using Java, Golang, and Apache Cassandra to compute and feed a near real-time feature to machine learning models for delivery fraud detection, saving over \$14 million yearly.
- Redesigned Java trip-streaming pipeline to filter non-production data, reducing Kafka message delays by 83%.
- Spearheaded a 7-person hackathon project to integrate the GPT-4 large language model in customer service chats using Python, resulting in a 14.3% reduction in time required to detect negative customer behavior.

AT&T – Chief Security OfficeDallas, TX

Software Engineering InternJune 2022 – August 2022

- Upgraded an internal network access service by using Python and Django to transition from cookie authentication to the SAML open standard, providing over 1,300 employees with a more secure, single sign-on process.
- Pioneered a novel infrastructure to stream video games with 70% lower latency, which was prototyped as a C++ text-based game engine and visualized in Figma. This invention is awaiting patent approval (no. 18/148,428).
- Developed scripts in Python, SQL, and HTML to uncover security vulnerabilities by parsing 500+ event logs and by automating data exports to Excel. Written and tested using the PuTTY SSH client.

RESEARCH

Georgia Tech Habanero Extreme Scale Software Research LaboratoryAtlanta, GA

Undergraduate Research AssistantAugust 2023 – Present

- Improved performance of topological sorting algorithm over 20% by removing yield calls in HClib (C++, actor/selector-based) using a global termination protocol for handling acyclic dependencies in distributed systems. Currently writing undergraduate thesis under Dean of Computing, Dr. Vivek Sarkar, and Dr. Akihiro Hayashi.
- Optimized triangle counting with a binary search variant, reducing mean lap times by 10% in OpenSHMEM weak scaling experiments up to 384 processing elements (PEs), evaluated using a SciPy-Pandas t-test script for hypothesis testing that generated PDF reports with graphs and results.
- Enhancing global mailbox termination to support synchronized termination across all PEs for cases with over 215 rows per thread, addressing scalability limitations in Single Program Multiple Data (SPMD) termination.

PROJECTS

- Nonprofit Organization Research Panel Social Media Analytics:** Scraped 2,660 videos from 56 nonprofit YouTube channels, storing data in a scalable MySQL database with Dockerized integration tests. Used Python (Pandas, VADER) for natural language processing, leveraging sentiment analysis to uncover statistical trends, distributions, and time-series patterns, supporting data-driven decision-making for over 2,800 NGOs.
- Enhanced xv6 Operating System:** Implemented stack trace debugging, copy-on-write forking, lazy zero-page allocation, custom scheduling algorithms, user space threading library, and large file support up to 8 MB in C.

SKILLS

Languages: Python, C++, Java, C, Golang, Swift, HTML, SQL, PHP, JavaScript

Frameworks: SciPy, Pandas, Apache Kafka, Apache Spark, JUnit, Spring Boot, Hadoop, Flask, React Native, Flutter, Django

Developer Tools: Linux, Git, Docker, Google Cloud Platform, GDB, Jupyter, Grafana, Visual Studio Code