Soham Gunturu

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EDUCATION

Georgia Institute of Technology **Expected Graduation: December 2026**

- *B.S. in Computer Science – Intelligence and Systems & Architecture Threads*
- Organizations: Trading at GT, AI at GT, Data Science at GT, GROWER Lab, HexLabs, Ganesh Lab, HIVE
- Coursework: Linear Algebra, Discrete Math, Computer Architecture, Data Structures & Algorithms, Objects & Design, OOP

The Ohio State University - *College Credit Plus Program* **Jan 2023 – Apr 2024**

- Coursework: Linear Algebra, Multivariable Calculus, Data Science and Visualization, Software Components 1, Econometrics

WORK EXPERIENCE

Amazon **Tempe, AZ**

Software Development Engineer Intern ***May 2025 – Aug 2025***

- AmazonCustom Team

College of Computing – Vijay Ganesh Lab **Atlanta, GA**

Undergraduate Researcher ***Apr 2025 – Present***

- Leveraging SAT solvers alongside computer-algebra systems (CAS) to push the boundaries of quantum information science, with an emphasis on characterizing and optimizing Greenberger–Horne–Zeilinger (GHZ) states.
- Developing original conjectures in Ramsey theory while advancing SMT techniques for formal verification and stress-testing of cutting-edge AI models and large-scale software systems.

GROWER Lab **Atlanta, GA**

Research Intern ***Aug 2024 - Present***

- Evaluating different methods to aggregate power outages in existing data by contrasting with Ground-Truth, enabling national labs like Sandia and Oakridge to understand how to approach outage analysis and policy change.
- Utilizing scrapers and AWS to retrieve outage data from 35+ states to build a comprehensive dataset for further trend analysis and prediction.
- Creating different dashboards and visualizations to understand the impact of physical and cyber-attacks on US energy infrastructure.

Nationwide Children's Hospital **Columbus, OH**

Computational Cancer Intern ***June 2023 – Dec 2023***

- Analyzed spatial datasets to identify differences between primary and metastatic tumors, resulting in a 20% faster differentiation which contributed to more targeted cancer treatments.
- Performed various bi-variate correlation studies and created visualizations to understand the architecture of brain tumors.
- Refined an Agent-Based Model's accuracy by 30% by fine-tuning PyTorch parameters, allowing researchers to better simulate cell interactions.

Harvard University **Cambridge, MA**

Data Science Intern / Teacher Assistant ***Jun 2022 – Aug 2022***

- Researched different healthcare, educational, and other societal trends to better understand the impact of various federal policies.
- Helped 100+ students undergo *Gov1005:Big Data*, assisting students in creating analytics dashboards, achieving a 95% project completion rate.
- Streamlined the CI/CD pipeline by optimizing GitHub Actions for the Primer-Tutorials R Package used to teach GOV1005.

PROJECT EXPERIENCE

GT Marketplace | *Typescript, NextJS, ReactJS, Firebase, Python, ExpressJS, HTML/CSS* ***Apr 2025 – Present***

- Designed and implemented a full-stack campus marketplace web enabling 300+ students to buy, sell, and trade items with other GT students.
- Includes real-time chats, firebase authentication, and a smart recommendation system for students to dynamically explore the marketplace.

Travel App | *Python, Django, Gemini, HTML, CSS, MapBox, Bootstrap, JavaScript* ***Feb 2025 – Present***

- Created an AI-powered trip-planning engine in Python/Django that combines Google Gemini large-language-model calls with Mapbox routing data to generate fully cost-constrained, day-by-day itineraries, adapting to real-time weather, flight delays, and local events.
- Integrated dynamic recommendation pipelines—budget-filtered hotels, restaurants, and "hidden gems" ranked by hybrid ML + rule heuristics.

Georgia Tech RAG Chatbot | *Python, NIM, Docker, ReactJS, PostgreSQL, Scrapy* ***Aug 2024 – Dec 2024***

- Designed a RAG-based LLM in collaboration with AI@GT and NVIDIA, allowing prospective Georgia Tech students/families to easily get accurate information about the institute.
- Built a robust vector embedding pipeline using Scrapy to scrape relevant data and PostgreSQL to store and manage the data.

SKILLS/INTERESTS

Languages: Python, Java, C/C++, Assembly, Javascript/Typescript, SQL, HTML, CSS
Frameworks: Node.js, React.js, Next.js, Express.js, Fast API, Django, Flask, React Native, Bootstrap
Software: PyTorch, Transformers, Pandas, Scikit-Learn, PostgresSQL, Firebase, AWS, Microsoft Azure, MongoDB, Docker, Scrapy
Awards: Ohio Governor's Scholar, Hack OHI/O 1st place, Huntington Scholar, Presidential Gold Award, Presidential Undergraduate Research Award
Leadership: Events Executive of Trading at GT, President of Taal Tadka Acapella, Team Lead at GROWER Lab
Interests: Technology, Basketball, Weightlifting, Cooking, Travel, Poker, Music