Aarya Singh

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EDUCATION

Georgia Institute of Technology   Atlanta, GA
B.S. in Computer Science, Minor in Mathematics | GPA: 4.0 | Concentrations: Intelligence & Theory   *December 2026*

- **Coursework:** Natural Language Processing, Deep Learning, Linear Algebra I & II, Multivariable Calculus, Advanced Algorithms, Applied Combinatorics, Stochastic Processes, Systems & Networks, Design & Analysis of Algorithms, Robotics, Real Analysis
- **Clubs & Activities:** Robojackets Software Team, GTXR Avionics, Quiz Bowl, Swim Club
- **Volunteering:** Coach, Robotics Team (250+ hrs); Tutor, Schoolhouse; Volunteer EMT/Firefighter & Lifeguard

EXPERIENCE

athenaHealth   Boston, MA
Analytics & Artificial Intelligence Intern - Data Science   *June 2025 - August 2025*

- Increased document classification accuracy to 96% by developing and training a CNN with TensorFlow and Python, enabling real-time processing of 500,000+ documents per day and reducing manual review workload by 40%.
- Conducted experiments with Large Language Models (GPT, BERT) for text classification, achieving comparable performance.
- Deployed CNN to production via LangGraph, integrating into athenaHealth's ML pipeline for real-time document processing.

Software Engineering Intern - Product Engineering   *June 2024 - August 2024*

- Developed a centralized catalog with the Backstage framework to provide powerful monitoring and simplified upkeep for athenaHealth's APIs. Optimized API response times by 30% through efficient data indexing and caching strategies.
- Implemented both front-end React apps to visualize API data and back-end Snowflake and Kibana querying.

GeneSweeper   Atlanta, GA
Researcher - Idea 2 Prototype   *August 2024 - Present*

- Developed a parallelized Python bioinformatics tool to search, filter, and export large RNAseq datasets (100+ GB) for BLAST analysis; reduced processing time from weeks to minutes, accelerating genomic analysis..

PROJECTS

Competitions

- Bloomberg Bpuzzled Global Finals (2025): Ranked 3rd among ~2200 contestants worldwide in Bloomberg's annual logic and algorithmic puzzle competition; one of 29 finalists invited to NYC headquarters.
- IMC Prosperity 3 (2025): Ranked in the top 0.8% among 12,000+ global teams in IMC's algorithmic trading competition; designed and optimized trading algorithms for market making, arbitrage, and multi-asset strategies across 15 simulated products.

GSM1K-French

- Developed a French-translated variant of GSM8K to study evaluation leakage in LLMs.
- Fine-tuned and tested Qwen2.5-3B, showing English overfit due to memorization while French improved generalization.
- Used zlib-based perplexity to confirm leakage, underscoring the need for multilingual benchmarks in reliable LLM evaluation.

Prosthetic Arm

- Designed and built a cost-effective, fully 3D-printed prosthetic arm using CAD and simulation. Incorporated innovative features for improved grip strength and dexterity, potentially benefiting users with limited access to traditional prosthetics.

LEADERSHIP

Robotics Club | *Captain & Programmer*   *2017 - 2023*

- Led the team to four world championships and a state title, cultivating strong team management and project coordination skills.
- Developed and deployed a GPS for absolute position tracking and movement correction using odometry and PID control.

Mars Society | *Researcher & Designer*   *2019 - 2024*

- Implemented YOLO for Martian resource detection, customizing loss function to maximize accuracy.
- Led research resulting in 3 papers selected for further study; finalist in the Moon Society's 2021 Moonbase Competition.

Quiz Bowl | *Captain*   *2016 - 2023*

- Conducted multiple national quiz bowl tournaments (online + in-person) & led team practice sessions.
- Achieved two U.S. national championship titles in 2023 (PACE NSC & HSNCT) and qualified for PACE NSC & HSNCT (2020 - 2022).

SKILLS

- **Languages & Frameworks:** Python, Java, C++, TypeScript, HTML, CSS, React, Node.js, SQL, MongoDB
- **ML & AI Tools:** TensorFlow, PyTorch, LangChain, LangGraph, OpenCV, Kubeflow, data pipelines
- **Cloud & DevOps:** AWS, Docker, Kubernetes, CI/CD, Jenkins, Backstage, Swagger, Snowflake, Git
- **Other**: CAD, 3D printing, Networking (TCP/IP), Agile