Neha Nataraj

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EDUCATION

Georgia Institute of Technology, Atlanta, GA **May 2028**
Bachelor of Science in Computer Science, Threads: Intelligence and Cybersecurity **GPA: 4.0/4.0**
Relevant coursework: Linear Algebra, Multivariable Calculus, Intro to Object Oriented Programming, Data Structures
PrizePicks and Matt Steele Track Winner (1/450 participants) AI ATL (Startup Exchange/AI@GT Hackathon)

Lambert High School, Suwanee, GA **May 2025**
High School Diploma. **GPA: 4.71/4.0, Rank 6/783 (Top 1%)**

TECHNICAL SKILLS

Languages: R, Python (pandas, numpy, scikit-learn, OpenCV), Java, Javascript, Bash
Skills: Artificial intelligence, statistical modeling, machine learning (random forest algorithms, support vector machines), computer vision, bioinformatics, data analysis, prototyping (Raspberry Pi), research & technical writing

EXPERIENCE

Astrophysics Researcher, Internship under Professor A. Nepomuk Otte **September 2025 – Present**
Georgia Institute of Technology, Center for Relativistic Astrophysics Atlanta, GA
Bash, Python (pandas, numpy)

- Advancing Neutrino astrophysics through computational simulation and data analysis. Currently optimizing high-throughput computing workflows for the Trinity telescope project.
- Investigating correlations between key physical parameters (energy, wavelength) to refine signal identification and background rejection techniques. Focusing on tau neutrino detection in ultra-high energy cosmic ray experiments.

Bioinformatics Researcher, Internship under Professor Paul Schliekelman **May 2024 – July 2025**
University of Georgia, Department of Statistics Athens, GA
R (tidyverse, data.table, ggplot2), Python (pandas, numpy)

- Research aimed to optimize p-value weighting approaches to improve accuracy in linking traits to SNPs.
- Compared p-value weighting methods for 16 traits, developed models to analyze q-values variance by percent tagged variance (PTV) across 6m genetic markers, and programmed GWAS to identify links between traits and genetic variants.

Bridge4Good (nonprofit organization), President and Co-Founder **May 2022 – Aug. 2025**
Python (Machine Learning, Random Forest Algorithms)

- Programmed random forest algorithm to target donations towards homeless shelters in areas that need them most.
- Spearheaded organization. Led 5 high school chapters across the U.S. and U.K., partnering with 23 homeless shelters, raising $16K+ through events attended by 500+ people, impacting 10,000 (featured on Atlanta News First).

AI and Informatics Researcher, Internship under Professor Aroon Manoharan **May 2023 – Aug. 2023**
Southern Methodist University
Python (Generative adversarial networks (GANs))

- Paper published based off my research in deepfake-related statutes across 42 U.S. states, quantifying the alignment between statutory language and technological advancements in synthetic media generation.

PUBLICATIONS

Nataraj, N. & Manoharan, A. (2024). A Comprehensive Review of the Legal Challenges Posed by Deepfake Technology. Journal of Student Research, 13(3). DOI: 10.47611/jsrhs.v13i3.7273.

PROJECTS

SVM Classifier for Tumors in Mammograms **Aug. 2024 – May 2025**
Python (scikit-learn, matplotlib)

- Developed an SVM-based breast cancer detection system by integrating different ratios of limited male mammogram data into larger female mammogram datasets.

Computer Vision (CV) aided Navigation for the Blind **Oct. 2023 – July 2024**
OpenCV, AWS SDK, Bash/Shell scripting

- Created a Raspberry Pi-based device using AWS computer vision to narrate surroundings for people with visual impairments, offering a $10 alternative to existing $4,000 models. Piloted the device under the Karna Vidya Foundation.