Ambareesh Shyam Sundar

ambareesh@gatech.edu • (408) 744-6798

🌐 ambaree.sh
⭘ ambareesh1510
in ambareesh-shyam-sundar

EDUCATION

Georgia Institute of Technology • GPA: 4.0 / 4.0   Expected Graduation: **May 2026**
Bachelor of Science, Computer Science   Atlanta, GA
Bachelor of Science, Mathematics
- Relevant coursework: Data Structures (Java), Honors Algorithms, Computer Organization and Programming, Dynamics and Bifurcations, Introduction to Perception and Robotics
- Clubs and organizations: GT Web Dev Club, GT Video Game Development Club, GT Competitive Math

Irvington High School   **June 2023**
High School Diploma   Fremont, CA
- Relevant coursework: AP Computer Science A, AP Calculus BC, AP Statistics
- Clubs and organizations: Marching band section leader, Physics Club officer, CS Club lecturer

Ohlone College   **June 2023**
Dual Enrollment   Fremont, CA
- Relevant coursework: Java Programming, Intro to Cybersecurity, Multivariable Calculus, Differential Equations

---

PROJECTS AND EXPERIENCE

Research with GT Computational Neuroscience group   **January 2024 - present**
Research Assistant   *Skills: PyTorch, computer vision*
- Conduct research regarding the optimization of biologically inspired perception-action machine learning models for active vision
- Run experiments to determine ideal parameters for vision models in order to optimize accuracy, learning rate, and computational feasibility

Coda • ⭘ ambareesh1510/coda   **April 2023 - December 2023**
Developer   *Skills: Rust, Low-level Audio APIs*
- Used cross-platform audio libraries to develop a parser and interpreter for a music synthesis programming language designed around low-level frequency manipulation
- Implement custom audio rendering logic to produce a variety of different sounds

LC-3 Assembler • ⭘ ambareesh1510/lasm   **October 2023**
Developer   *Skills: Rust, Assembly Programming*
- Created a comprehensive set of tools for writing, debugging, and assembling programs for the Little Computer 3

Research on Chaotic Hash Functions • ⭘ ambareesh1510/chaotic-hash-functions   **November 2023**
Independent Researcher   *Skills: C, Python/Jupyter Notebook, data analysis*
- Completed a research project regarding the effectiveness of cryptographic hash functions designed using simple discrete chaotic maps as a part of MATH 4541 (Dynamics and Bifurcations I) at Georgia Tech
- Programmed and benchmarked various hash algorithms in C, then analyzed the results using NumPy and Matplotlib

FIRST Tech Challenge   **September 2017 - March 2022**
Programming Lead   *Skills: Java, Python, TensorFlow*
- Used TensorFlow, coupled with a custom implementation of a proportional-integral-derivative controller, to program a robot capable of completing various challenges using a Java API

AWARDS	Four-time AIME qualifier; high score of 7			National Merit Scholar			Eagle Scout	
TECHNICAL SKILLS	Rust	C/C++	SDL	Java	React	PostgreSQL	LaTeX	Git	Linux (Arch)
LANGUAGES	English (native)		Tamil (native)		Mandarin Chinese (proficient)		Sanskrit (proficient)	