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), Graduate Algorithms, Computer Organization and Programming, Design of Digital Systems, Introduction to Perception and Robotics
- Clubs and organizations: GT Web Dev Club, GT Video Game Development Club, GT Competitive Math

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

GT/IBM Virtual Summer Internship Program   **May 2024 - August 2024**
Developer   *Skills: PyTorch, Python, C++*
- Worked with mentors from IBM to learn about and contribute to various projects under the PyTorch Foundation, including the main PyTorch repo and PyTorch tutorials
- Debugged erroneous code relating to the Torch just-in-time compiler and TorchDynamo

Dungeon Deja Vu • ☎ dsfhdshdjtsb/dungeon-deja-vu   **August 2024**
Gameplay and Audio Programmer   *Skills: Rust, Bevy, Game Development*
- Developed a full-fledged platformer game with 6 levels and ~1 hour play time for Bevy Game Jam #5
- Placed 8th overall out of 77 entries, winning 3rd place in the Game Design category

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

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*
- Worked with other high school students to design, build, and program a robot capable of completing various challenges using a Java API, winning multiple awards for robot design and outreach

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