

Ambareesh Shyam Sundar

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EDUCATION

Georgia Institute of Technology • GPA: 4.0

Expected Graduation: **May 2026**

Bachelor of Science, Computer Science

Atlanta, GA

Bachelor of Science, Mathematics

- Relevant coursework: Data Structures, 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

- Conducting research regarding the optimization of biologically inspired perception-action machine learning models for active vision

Coda • www.github.com/ambareesh1510/coda

April 2023 - present

Project Lead

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

LC-3 Assembler • www.github.com/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 • www.github.com/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

Mood Journaling • www.github.com/joshdabosh/moodjournaling

October 2023 - present

Developer

Skills: React, Python, Flask

- Developed a full-stack web application to help users track their mood over time, incorporating generative AI to provide relevant visuals

GT Reviews • www.github.com/buzzwalk/reviews

September 2023 - present

Backend Programmer

Skills: React, Rust, Axum, Firebase

- Developed a full-stack application to allow Georgia Tech students to review residence halls, dining halls, classes, and professors
- Wrote a high-performance, scalable backend using Rust and the Axum web framework, along with Firebase

Chief Technology Officer

Skills: Rust, gRPC, Discord.js

- ## FIRST Tech Challenge

September 2017 - March 2022

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
- Used TensorFlow, coupled with a custom implementation of a proportional-integral-derivative controller, to ensure precision in robot movement
- Won multiple regional 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++	SDL	Java	React	PostgreSQL	LaTeX	Git	Linux (Arch)
LANGUAGES	English (native)		Tamil (native)		Mandarin Chinese (proficient)			Sanskrit (proficient)	