

# Varun Warriier

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## EDUCATION

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### Georgia Institute of Technology

Expected May 2026

*Bachelor of Science in Computer Science - Intelligence & Devices Concentration*

*GPA: 3.82*

- Relevant Coursework: Data Structures and Algorithms, Design and Analysis of Algorithms, Objects and Design, Systems and Networks, Object-Oriented Programming, Computer Organization and Programming
- Honors: Faculty Honors, Dean's List

## EXPERIENCE

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### Georgia Tech School of Computing Instruction

Aug. 2024 – Present

*Undergraduate Teaching Assistant*

*Atlanta, GA*

- Instructed students in foundational computing concepts, including computer architecture, LC-3 Assembly, and C, leading a lab of 40+ students to complete hands-on activities in programming and circuit diagramming.
- Developed and reviewed assignments to evaluate learning, as well as comprehensive solutions for student tasks.
- Diagnosed and resolved student issues with circuit diagramming, Assembly programming, and boolean algebra.

### Queen City Robotics Alliance

Jan. 2022 – Apr. 2023

*Software Instruction Intern*

*Charlotte, NC*

- Spearheaded development and administration of a curriculum to teach block coding and basic computer-aided design through LEGO robotics to over 50 elementary-school aged children.
- Mentored 20+ students in block coding, Java, Python, and CAD, with 90% passing basic competency tests.
- Led a team of 20 instructors in preparing and teaching curriculum, organized into different subject areas.
- Delivered speeches to Charlotte-area professional organizations on behalf of QCRA, promoting the value of STEM education for K-12 students, boosting donations to the nonprofit by 31%.

### Apple

July 2022 – Aug. 2022

*Hardware Engineering Student*

*Remote - Cupertino, CA*

- Worked closely with Apple engineers to create a confidential prototype, combining hardware, software, and electrical aspects. 1 of 29 students selected from 3000+ applicants.
- Led a team of 6 fellow students to present our findings and proposed product to Apple's Senior Vice President of Hardware Engineering, as well as other executives and senior leadership.
- Focused on software/computer engineering elements of the product, using Swift, SwiftUI, and CircuitPython.

## PROJECTS

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### C-SHell (csh)

- Developed a custom Unix shell in C, providing a Command-Line Interface for executing user commands.
- Supports execution of standard Unix commands as well as builtins such as *cd*, *help*, *echo*, etc.
- Implemented a loop to continuously prompt for user input, parse commands, and execute them appropriately.

### Restaurant Reservation System

- Created a full-stack web application for creating, managing, and deleting customer reservations and orders across a network of restaurants with varied owners and food items.
- Backend built with Java, utilizing Javalin for lightweight API framework and robust error handling.
- Frontend constructed with HTML and CSS, using Pebble for uniform design and modularity.

### 4th and Long

- Developed a Game Boy Advanced football game in C and run with Make, where a player tries to score a touchdown against a team of defenders.
- Implemented pathing logic to have attacking NPCs dynamically follow the player's character.
- Utilized a variety of game, success, and failure screens to react depending on user input and game state.

## TECHNICAL SKILLS

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**Languages:** C, Java, Python, Swift, SwiftUI, CircuitPython, LC-3 Assembly

**Tools:** Git, Github, Docker, Linux/Unix, GDB, VS Code, XCode, PyCharm, IntelliJ

**Libraries and Frameworks:** opencv, Django, NumPy, Matplotlib, Javalin, JavaFX

**System Design:** GRASP, SOLID, Test-Driven Development

**Other:** Fusion360, OnShape, Microsoft Excel, Video Editing