

# S. Hamza Qadri

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## EDUCATION

### Georgia Institute of Technology

Atlanta, GA

Bachelor of Science in Computer Science, GPA: 4.0

Expected Graduation: Dec 2025

- Coursework: Intro to Computing (Python), Object-Oriented Programming (Java), Data Structures & Algorithms, Computer Organization & Programming, Discrete Mathematics

## EXPERIENCE

### Bits of Good — Helping Mamas

Sep 2023 - Present

Developer

Atlanta, GA

- Developing a volunteer management system to be used by *Helping Mamas* and other nonprofit organizations
- Utilizing Next.js framework for API and server-side rendering alongside React and MongoDB
- Attending weekly meetings to discuss progress, assign tickets, and plan sprints

### GT WebDev

Jan 2023 – May 2023

Project Team Member

Atlanta, GA

- Developed a multiplayer chess web application with four team members
- Studied backend development via exposure to MongoDB and Express.js
- Utilized agile development practices by using GitHub Projects and Discord to coordinate development
- Presented the profile page and spoke about its development to 60+ demo day attendees

### Secret Stash

Jun 2021 – Aug 2021

Data Analytics Intern

Karachi, Pakistan

- Processed and analyzed data using Python and Google Sheets API for an e-commerce startup
- Used Python's *difflib* module to correct spelling differences in 1500+ customer names and assign unique IDs
- Calculated which cities were most popular among buyers and adjusted for population
- Determined various metrics including buyer-seller overlap and customer lifetime values

## PROJECTS

### BuzzCat: Course Catalog Application and Web Scraper | TypeScript, Python, React, PostgreSQL, Express.js

- Built a comprehensive course catalog web application for Georgia Tech students
- Scraped course data from 100,000+ class-specific endpoints using an `asyncio`-based scraper written in Python
- Parsed course prerequisite strings to display them as easily readable and expandable indented lists
- Implemented authentication using Google Firebase to store user course history and settings

### YobeBoy: Nintendo Game Boy Emulator | C

- Developed an emulator for the Nintendo Game Boy console, capable of running several commercial games
- Implemented advanced features such as interrupts and memory bank switching to allow complex games to run
- Passed 38 out of a set of 40 CPU instruction accuracy tests, as well as all instruction timing tests

### mfChess: Multiplayer Chess Game | React, TypeScript, Figma

- Engaged with four team members to develop a WebSockets-based online chess game
- Developed significant sections of the user interface including the title screen, profile page, and chess pieces

### Lambda Calculus Interpreter | Python, L<sup>A</sup>T<sub>E</sub>X

- Wrote an interpreter consisting of a lexer and parser as part of an open-ended research project
- Designed an algorithm to convert lambda calculus expressions to binary abstract syntax trees
- Added functionality to store expressions in variables, allowing seamless expression reuse

## SKILLS

**Languages:** Python, C, Java, Bash, HTML/CSS, JavaScript, TypeScript

**Technologies and Frameworks:** React, Express.js, Next.js, MySQL, PostgreSQL, MongoDB, Firebase

**Developer Tools:** Git, Visual Studio Code, IntelliJ/Android Studio

**Platforms:** Linux (Ubuntu, Arch), Windows, macOS