

# Ayaan Rahman

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## EDUCATION

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### University of Virginia

Charlottesville, VA

*Bachelor's Degree in Computer Science | GPA: 3.98 | Dean's List.*

*Expected Graduation: May 2025*

**Coursework:** Advanced Algorithms and Implementations, Data Structures & Algorithms, Computer Systems & Organization, Discrete Mathematics & Theory, Software Engineering, Software Development Essentials, Linear Algebra, Introduction to Cybersecurity

**Clubs:** Google Developer Student Club, Project Code, Founders at UVA, Club Pickleball, Pakistani Student Association

## EXPERIENCE

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### Software Engineering Intern

May 2024 – Present

*Navy Federal Credit Union*

*Vienna, VA*

- Developed and designed reusable components in Adobe Experience Manager with HTL, JavaScript, and Sass in an agile team, driving 100K+ user interactions and streamlining cross-team development.
- Refactored 250+ code smells, including memory leaks and redundant logic, using SonarQube, resulting in a 25% reduction in deployment errors and enhanced system maintainability.
- Resolved 100+ security and code quality issues flagged by Checkmarx and BlackDuck, ensuring compliance with industry standards and enhancing the security posture of Navy Federal applications.

### Undergraduate Teaching Assistant

January 2024 – May 2024

*University of Virginia*

*Charlottesville, VA*

- Conducted weekly office hours, assisting 30+ students with complex topics such as CPU architecture, x86 assembly, memory management, and Linux networking.
- Proctored and graded exams and assignments for 175+ students, providing constructive feedback to increase understanding of C programming and system-level concepts.

### Undergraduate Research Assistant

September 2023 – December 2023

*University of Virginia*

*Charlottesville, VA*

- Improved sheet music digitization accuracy for the University of Virginia orchestra by 15% through the development and optimization of algorithms, surpassing the performance of previous software.
- Utilized PyTorch, a deep learning framework, to program and implement innovative optical music recognition (OMR) algorithms to elevate the quality and precision of sheet music conversion.

## PROJECTS

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### EventEase | *Django, PostgreSQL, Amazon S3*

- Engineered and deployed a full-stack event-planning web application on Heroku with Google OAuth for secure, role-based access, allowing users to manage events, upload files, and synchronize with Google Calendar.

### HooRides | *React Native, Firebase, Google Maps API*

- Developed a carpooling application using React Native for 24,000+ University of Virginia students, streamlining campus mobility and fostering a community-driven transportation network.
- Integrated Firebase for backend operations, including data storage, user authentication, and real-time updates, ensuring robust app functionality and secure user data management.

## SKILLS

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**Languages:** Java, Python, JavaScript, TypeScript, C/C++, SQL, R, HTML/CSS, XML, Bash

**Frameworks:** React.js, React Native, Next.js, Node.js, Express.js, Django, Hibernate, Sass, HTL, jQuery

**Tools & Platforms:** Git, Linux, Postgres, MongoDB, Firebase, Azure, AWS, Heroku, PyTorch, Vector Databases