Ayaan Rahman

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EDUCATION

University of Virginia

Charlottesville, VA

Bachelor's Degree in Computer Science | GPA: 4.0 | Dean's List.

Expected Graduation: May 2025

Coursework: Operating Systems, Advanced Algorithms and Implementations, Data Structures & Algorithms 2, Computer Systems & Organization 2, Discrete Mathematics & Theory 2, 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

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 using SonarQube, improving code quality and addressing outdated Java and JavaScript practices.
- 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

- Collaborated with a team of 4 professors to refine the accuracy of sheet music digitization for the University of Virginia orchestra by an estimated 15% in comparison to 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

 $\mathbf{EventEase} \mid \mathit{Django}, \ \mathit{PostgreSQL}, \ \mathit{Amazon} \ \mathit{S3}$

• 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

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