

Raahi Vyas

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EDUCATION

University of Virginia | School of Engineering and Applied Sciences

Charlottesville, VA

B.S. in Mechanical Engineering

Class of 2029

Relevant coursework: ENGR 1010 (Engineering Foundations), CS 1110 (Introduction to Programming in Python)

South Lakes High School | International Baccalaureate

Reston, VA

B.S. in Mechanical Engineering

Class of 2025

Extracurricular activities: Marching Band, National Honor Society, Mu Alpha Theta, Tri-M Music Honor Society, and Sociedad Honoraria Hispánica

GPA: 4.475 | **SAT Math:** 790, **Reading:** 720

EXPERIENCE

Mechatronics and Robotics Society (MARS)

Charlottesville, VA

Mechanical Engineering Team

August 2025 - Present

- Developed and assembled mechanical subsystems for competitive robotics projects, applying CAD design and rapid prototyping to enhance functionality and performance; completed CAD training on Onshape software (cloud-based SOLIDWORKS)
- Integrated mechanical designs with electrical and software teams, ensuring precise alignment of actuators, sensors, and structural components
- Tested, iterated, and validated rover/robot mechanisms in preparation for NASA-hosted field trials, improving reliability under mission-style constraints

Charlottesville Symphony (CSO) at the University of Virginia

Charlottesville, VA

Clarinetist

August 2025 - Present

- Qualified through a rigorous audition process and prior experience in the All-Virginia Band and Orchestra for B-flat and A clarinet: 2nd (2025), 4th (2024), 8th (2023), 23rd (2022)
- Performing alongside 20+ music faculty professors from the University of Virginia and 10+ musicians based in Charlottesville, Virginia
- Required skills include strong communication, collaboration, and ability to deliver under performance pressure due to weekly rehearsals and 7 concerts each season

South Lakes High School (SLHS) "Spirit of Reston" Marching Band

Reston, VA

Drum Major (President)

August 2022 - June 2025

- Led, taught, and supervised 90+ students, collaborated with 10+ staff members, and conducted 30+ pages of music
- 2023: Awarded the George N. Parks Drum Major Academy Certificate for leadership and conducting
- Organized annual fundraising event, raising ~\$40,000 for uniforms, instruments, and professional support
- Elected Student Representative for the South Lakes Band Boosters Program, providing insight on fundraising and travel logistics for 120+ students

Fairfax County Public Schools (FCPS) Franklin Band & Orchestra Camp

Chantilly, VA

Teaching Assistant

June 2022 - July 2024

- Collaborated with 20+ music directors from Northern Virginia by directing rehearsals and handling music paperwork
- Supervised 300+ campers by managing pick-up and drop-off traffic and catering lunch and snacks

AWARDS & HONORS

South Lakes Band Department Award Recipient

May 2025

Recognized to one senior, demonstrating excellence in musical performance and commitment to ensemble success

Posse Foundation Scholarship Semi-Finalist

October 2024

Selected as a Semi-Finalist for the Posse Foundation, a prestigious leadership-based scholarship program, partnering with 64 top colleges and universities nationwide, for a full-tuition scholarship to the University of Virginia

Fairfax County Regional Science & Engineering Fair

March 2022

Awarded 1st Place in Physics & Astronomy at the South Lakes High School Science Fair, 2nd Place in Physics & Astronomy at the Fairfax County Regional Science and Engineering Fair, and an AFCEA NOVA Honorable Mention in STEM

SKILLS & CERTIFICATIONS

Languages: Fluent in English, Conversationally Proficient in Spanish and Hindi

Certifications: Python for Everybody 5 Course Specialization by the University of Michigan

Skills: Computer-Aided Design (Fusion 360, Solidworks 2025, Onshape), 3D Printing (development and manufacturing with Snapmaker), Programming (Python)