

# Sohum Sachdev

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## Education

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Severn School

Severna Park, MD

4.19 GPA, Head's List

Class of 2028

Relevant Coursework: AP Physics 2, Honors Functions/Calculus A, AP World History, Honors Chemistry, Honors Physics

## Research Experience

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### Johns Hopkins University Extreme Materials Institute/Nanoenergy Lab

Baltimore, MD

Army Education Outreach Program (AEOP) Intern

Summer 2025

- Selected for a competitive paid internship in the NanoEnergy Lab under professor and PhD student's mentorship
- Performed experimental lab work & computational (FDTD) simulations
- Investigated leveraging gold plasmonics to detect magnetic states in 2D materials via Raman spectroscopy, a common tool in biological and chemical analysis; Abstract to be published in AEOP research journal
- Applications across various domains, including medical imaging, targeted drug delivery, and biomarker detection
- Explored improving the efficiency of solar cells with plasmonics

## Leadership, Activities, & Athletics

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### Medical Studies Club

Severna Park, MD

Member → Co-President

September 2024 – Present

- Plan, prepare, and run meetings (medical skills workshops, certifications, etc.) for 60+ members
- Moderated school-wide seminar on sports injury causes, prevention, and myths, preparing a seminar on sleep health.
- Organized doctor visits where they shared their experiences & taught hands-on skills (e.g., suturing)
- Facilitated CPR certification sessions and Ambulance and EMT educational visits

### Cyber Team

Severna Park, MD

Member → President

October 2022 – Present

- Plan meetings and participation in national & international contests, like CyberPatriot (reached national Semi-Finals)
- Organized Texas Instruments Codes participation, funded as one of 10 finalists for classroom delivery rover project

### Scouts of America

Severna Park, MD

Member → ASPL (VP) → Quartermaster

February 2020 – Present

- Planning and building pole mounted solar powered phone charging station at a local park for Eagle Scout Project
- Lead weekly scout meetings, plan monthly outings, organize supplies, and participate in community service projects
- Mentor younger Scouts in outdoor skills, leadership, and rank advancement

### Varsity Wrestling (2025 MIAA B Conference Runner-up), JV Tennis (MVP)

Grade 9 – Present

## Skills, Awards, & Interests

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- **Technical:** MATLAB, Solar Circuits, CAD, Ansys Simulations, HTML/CSS/JS, Python, First Aid/CPR
- **Awards (STEM):** CPR/AED (American Red Cross), FEMA's CERT (Emergency Preparedness), AEOP GEMS summer program, U.S. Naval Academy Summer STEM
- **Awards (other):** Presidential Volunteer Service Award (silver), Optimist International Essay Competition bronze medal, National Latin Exam 2x silver medal, Maryland Veterans of Foreign Wars Buddy Poppy Contest third in group
- **Interests:** Building projects in engineering, medicine, & technology; Cooking, Baking, Backpacking, Music, Investment
- **Language:** English, Hindi, Latin (Elementary)