

Sohum Sachdev

257 Finnegan Drive • Millersville, MD 21108 • [sohumvedant@gmailcom](mailto:sohumvedant@gmailcom) • 571-274-7013

Education

Severn School  
419 GPA, Head's List

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

## Research Experience

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 professor and PhD 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 efficiency of solar cells with plasmonics

## **Leadership, Activities, & Athletics**

## Medical Studies Club

## Member → President

Severna Park, MD

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
  - 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

Member → President

Severna Park, MD

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

Member → ASPL (VP) → Quarter Master

Severna Park, MD

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, JV Tennis (MVP)**

Grade 9 – Present

## Skills & Interests

- **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)