

# Jahaan Patel

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## PROJECTS/RESEARCH

### Monitoring Subconcussive Impacts Through a Helmet-Embedded Device — Research Oct 2024-Apr 2025

*Solo Researcher*

Aldie, VA

- Engineered a helmet-embedded impact monitoring device integrating a custom PCB, a multi-sensor array, and a 3D-printed protective casing to track subconcussive impacts in sports, military, and construction applications.
- Developed a Python-based Bluetooth interface for real-time impact visualization and performance analytics.
- Presented research to medical and engineering professionals at the 2025 LCPS Regional Science and Engineering Fair, earning multiple awards and monetary recognition.

### Business Solutions Project — Marketing & Community Engagement Campaign Sep 2024-May 2025

*Digital Media Lead*

Aldie, VA

- Led marketing strategy for a college-planning service, conducting market analysis, optimizing META ad campaigns, and producing targeted social media content, resulting in increased regional reach and engagement.
- Applied advanced project management, data analytics, and strategic communication skills to secure State Finalist placement at the 2025 DECA SLC and rank Top 30 internationally at ICDC.

### Money Trees — Financial Literacy Program

Sep 2023-May 2024

*Founder*

Aldie, VA

- Collaborated with two peers to design and execute a financial literacy program aimed at educating teenagers on sound money management and long-term economic success.
- Produced and delivered a competitive written proposal and formal presentation for evaluation by industry professionals at the 2024 DECA State Leadership Conference (SLC).
- Placed Top 7 at SLC, advancing to the 2024 DECA International Career Development Conference (ICDC).

## EXPERIENCE

### Mathnasium

Sep 2025-Present

*Math Tutor*

Stone Ridge, VA

- Tutored elementary-level math, Pre-Algebra, Algebra, Geometry, and Algebra II
- Collaborated with coworkers to structure lesson plans

### John Champe DECA Chapter

Aug 2023-Present

*Member*

Aldie, VA

- Organized and led 4+ community initiatives, including fundraisers and workshops
- Planned and executed school merchandise operations
- Collaborated with members to design and deliver professional reports and presentations, driving community impact and member participation.

## VOLUNTEER EXPERIENCE

### Children's Science Center

Feb 2025-Aug 2025

*Lab Volunteer*

Fairfax, VA

- Educated 200+ preschool and elementary students on STEM topics through interactive experiments and projects
- Collaborated with team members to enhance visitor experience

## ACHIEVEMENTS

2x DECA SLC Finalist | 2x DECA ICDC Qualifier | DECA Certificate of Achievement | RSEF Biomedical Engineering Aspiring Scientist Award | RSEF Collins Aerospace Award | RSEF Institute of Electrical & Electronic Engineers (IEEE) Technology Excellence Award | RSEF Potomac Section of American Industrial Hygiene Association (AIHA) Outstanding Project in Occupational and Environmental Health and Safety - Second Place