

# DEVEN V. BALAJI

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## EDUCATION

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Montgomery Blair High School Science, STEM Magnet Program | Silver Spring, MD (Expected) May 2028  
GPA: 4.0/UW; 5.0/W (Honor Roll), 150+ Volunteer Hours

## SKILLS

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**Programming:** Java (2 years), Python (5 years)

**Software:** Android Studio, VS Code, Eclipse, PyCharm, Git, GitHub, SourceTree

**AI:** Google Gemini API, OpenAI API, Roboflow

**Platforms:** NVIDIA Jetson Nano, Raspberry Pi, Arduino

**Design & CAD:** OnShape (2 years)

**Relevant Coursework:** Algorithms and Data Structures A/B (AP CSA), Analysis of Algorithms, Analysis 1 A/B (AP Calculus BC), Magnet Functions (AP Precalculus), Magnet Physics (AP Physics 1), Magnet Earth/Space Science, Magnet Chemistry, Magnet Biology (AP Biology)

**Clubs:** Makers Club, Physics Team, Math Team, Tri-M Music Honors Society

## PROJECTS

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### FIRST Tech Challenge (FTC) Robotics Competition

2025–26 Season: **Team 6417, Blu Cru** – Lead Software Developer (2025 - present)

- Developed autonomous and human operator (TeleOp) software for a robot with 11 sensors, including a Limelight 3A vision camera.
- Won 1st place Inspire Award at the Chesapeake Regional Championship (280+ teams); qualified for FIRST Championship 2026 in Houston, TX (1st of 11 advancing teams).

2024–25 Season: **Team 25865, FeNiX.exe** – Lead TeleOpDeveloper

- Developed state-machine-based TeleOp software for a robot with 11 sensors.
- Won 1st place Inspire Award at the Chesapeake Regional Championship (250+ teams); qualified for FIRST Championship 2025 in Houston, TX (1st of 5 advancing teams).
- Joined Blu Cru in summer 2025; accelerated software development and testing for the Maryland Tech Invitational (MTI) hosted at Johns Hopkins APL; team placed 7th of 42 teams.

2023–24 Season: **Team 23495, Equinox** – Lead Software Developer

- Led software development for a robot with 6 sensors.

### Garden Iron Dome: AI Deer Detection & Garden Defense System

- Currently, designing and developing an NVIDIA Jetson Nano-based “iron dome” system that uses real-time computer vision to detect deer in the yard and scare them away.

### Scout: An AI Assistant for the Visually Impaired (Jan-Mar 2024)

- Designed, developed, and prototyped a system that uses Gemini, a multimodal AI model, to assist the visually impaired in daily life.
- Implemented the system on Raspian OS, Python, Google’s speech-to-text, Pico2Wave’s text-to-speech, EvDev, Google Generative AI.
- Won 1st place at ScienceMontgomery’s Science Fair Middle School Comp Sci Division and placed in the Top 300 out of 1862 in the National ThermoFisher Junior Innovators Challenge.

## AWARDS

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### Math Competitions

- 2x qualifier for the American Invitational Mathematics Exam (AIME), during 9th and 10th grade.
- University of Maryland Math Competition Honor Roll (2025).
- 7th place, Maryland MATHCOUNTS State Competition (2024).
- Qualified for Math League Nationals (2022).

### National Science Bowl

- 1st place in the Maryland Middle School Regional Science Bowl.
- Placed in the top 7 in the Middle School National Science Bowl.