

Jacob Menachery

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Education

Virginia Tech, Blacksburg, VA

B.S. in Electrical Engineering, Class of 2027 | GPA: 2.93 | August 2024 – Present

Howard High School, Ellicott City, MD

Graduated May 2024 | GPA: 4.40 (Weighted), 3.75 (Unweighted)

Experience

VT SolarCar (Low Voltage Electrical Subteam) *August 2024 - Present*

- *Designed and tested mechanical and electrical components.*
- *Developed proficiency in PCB design and circuit analysis.*
- *Collaborated on system integration and optimization.*

First Tech Challenge Chesapeake – Team 17394 (Howard Robotics) *September 2021 - May 2024*

- *Captain & President (2023–2024): Led team operations, mentored members.*
- *Designed, tested, and optimized robotics systems.*
- *Fostered teamwork and problem-solving in competitions.*

Project Lead the Way (Engineering Program) *September 2018 - May 2024*

- *Applied engineering principles to real-world projects.*
- *Hands-on experience with CNC milling and CO2 laser engraving.*
- *Developed functional prototypes from research to completion.*

Skills

- **Programming:** Python, C++, Java
- **Manufacturing:** CNC machining, SLS & FDM 3D printing
- **Circuit Design:** PCB design, digital/analog signal processing, DC power
- **Software:** Autodesk Fusion 360, KiCAD, MATLAB, Python (Data Analysis)

Honors & Awards

- *2nd Place – Howard County Engineering Development & Design Expo*
- *Amentum National Security Family Scholarship Winner (2024)*
- *FTC Awards: Connect & Innovate Awards (2023–2024)*