Joseph Lilly Jr.

Sewell, NJ • +1 (856)-449-4553
Joseph24@vt.edu • www.linkedin.com/in/joseph-lilly-jr

PROFESSIONAL SUMMARY

Motivated Aerospace Engineering student at Virginia Tech with a strong foundation in problem-solving and teamwork skills. Experienced in using MATLAB and Python for computational modeling, data analysis, and plotting. Collaborative team member with strong communication skills and a passion for supporting mission critical defense technologies.

EDUCATION

Virginia Tech, Bachelor of Science, School of Engineering, 3.69 / 4.0 GPA **Expected May 2028**
Clearview Regional High School, High School Diploma **June 2024**

ENGINEERING ENGAGEMENTS, PROJECTS AND SKILLS

Tools: AutoCAD, OnShape, SolidWorks, Fusion 360, Mathematica, Python, MATLAB, CNC, Laser Cutting

Virginia Tech's Wind Turbine Team, *Blade Design*

- Contributed by researching and evaluating airfoils to optimize energy output for a mini-scale floating wind turbine operating in the Great Lakes region
- Analyzed airfoil performance using Reynolds number estimates and 3D printability constraints; processed airfoil coordinate data from Airfoil Tools in MATLAB to reduce point density and export files for SolidWorks modeling and 3D printing

Ionic Wind Thruster, *Personal Project*

- Engineered an ionic wind thruster by testing and refining multiple prototypes, overcoming repeated failures to ultimately produce a functional design with 3.2 m/s airflow

Stihl 4 in 1 Lawn Tool Project, *TSA Project*

- Designed a compact 4-in-1 maintenance tool for STIHL to reduce storage space, creating a parametric 3D CAD model in OnShape integrating charging, sharpening, lighting, sensing, and storage functions
- Created multiview engineering drawings and a visual presentation billboard for TSA, clearly communicating design intent and functionality

Homemade Musical Instrument, *College Team Project*

- Collaborated on a team project to design and build a low-cost electric guitar using SolidWorks and Fusion 360, meeting tight milestone deadlines and design reviews throughout the semester
- Fabricated and prototyped two iterations and a final design using CNC machining, laser cutting, and hand-finishing tools, delivering a functional instrument under $50 capable of playing multiple octaves; contributed to technical reports documenting development and testing

EXPERIENCE

STEM Instructor Intern, *Lavner Education,* Cherry Hill, NJ **June – Aug. 2025 & 2026**

- Delivered instruction in coding, robotics, 3D modeling, and game design, reinforcing technical problem-solving and communication skills
- Supported software, and network troubleshooting, gaining hands-on experience technical issue solving
- Organized equipment setup, inventory, and classroom operations while demonstrating leadership, adaptability, and collaboration in a fast-paced STEM environment

Crew Member, *Briad Wenco (Wendys)*, Mantua Sewell, NJ **June 2023 – July 2024**

- Adapted quickly to multiple roles including cashier, grill, bagging and more, ensuring efficient operations in a dynamic team environment
- Applied problem-solving skills to maintain workflow efficiency while balancing customer service, management standards, and closing procedures
- Maintained organization and attention to detail through cleaning, position stocking, and preparing equipment and workspaces for the next shift