

Aidan Matson

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EDUCATION

Valparaiso University Bachelor of Science, *Mechanical Engineering*

Aug 2022 – May 2026

Cumulative GPA 3.4

EXPERIENCE

Quad Plus Joliet, IL *Engineering Intern*

June 2022 – Present

- Performed on-site service at steel mills, paper mills, manufacturing plants, recycling plants, and concrete mixing facilities.
- Assisted with multi-day service visits and completed a 3-week deployment, upgrading and maintaining critical systems to minimize downtime.
- Serviced various manufacturing lines by diagnosing faults such as broken wiring, programming issues, and equipment failures.
- Programmed automation systems using Allen-Bradley and Siemens PLCs, controlling motor drives and developing HMIs.
- Conducted 13,800-volt power tests on E-Fracking units, following detailed electrical diagrams to ensure safety and compliance.
- Collaborated with engineers, technicians, and electricians to coordinate repairs and upgrades across various facilities.
- Adhered to OSHA 10 and NFPA 70e safety standards, performing lockout/tagout procedures during high-voltage operations.

SKILLS

- **Software:** SolidWorks, Autodesk, MATLAB, OnShape
- **Manufacturing:** Machining, 3D printing, Equipment service
- **Automation:** PLC programming, Microcontroller systems, Controls
- **Certifications:** OSHA 10, NFPA 70e
- **Personal:** Leadership, Problem-solving, Collaboration, Adaptability

ACTIVITIES

Valpo Aviators Club *Cofounder and Copresident*

December 2024 – Present

- Founded the Valpo Aviators Club to foster interest in aerospace among engineering students at Valparaiso University.
- The club started with 5 initial members and an executive board, growing to 15 active members through outreach.
- Used personal experience in aircraft design and building to mentor members in aviation-related projects.
- Built strong connections with the College of Engineering to position the club as a resource for aerospace-related learning.

PROJECTS

Long Range Autonomous Plane

- Designed and built an RC plane capable of completing waypoint-based missions autonomously.
- Integrated flight controller with GPS for precise navigation and mission planning.
- Equipped the plane with an ELRS receiver, FPV camera, and transmitter for real-time control and video transmission.
- Achieved a mission range of over 10 miles, showcasing long-distance flight capabilities and system reliability.

Microcontroller-Based Motor Control (Valparaiso University Research)

- Developed a microcontroller system to control a motor-driven flywheel with adjustable movement via encoder feedback.
- Designed control loops to allow for precise real-time adjustments to the wheels motion.

CNC Laser Cutter

- Built a diode-powered laser cutter using an Arduino to control stepper motors, leveraging open-source software.
- Designed and constructed the frame, prioritizing rigidity and flatness to achieve smooth and precise motion.

Homemade Rocket Engine

- Designed and tested KNSU-propelled rocket engines
- Used MATLAB for nozzle optimization and constructed a test stand to measure impulse
- Experimented with aluminum, steel, and resin nozzles, and cast custom brass versions for testing.