

Drew Novak

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Education

Purdue University, College of Engineering

West Lafayette, IN

B.S. in Mechanical Engineering, minor in Electrical & Computer Engineering

May 2028

- GPA: 3.80/4.00
- John Martinson Honors College | Dean's List and Semester Honors: Fall 2024, Spring 2025, Fall 2025, Spring 2026

Professional and Technical Leadership Experience

Firefly Aerospace

January 2026 - May 2026

Structures Engineering Intern

Briggs, TX

- Implemented and fully executed design improvements on 9 parts for Blue Ghost 2 Lunar lander, Eclipse, and Alpha rocket.
- Worked directly with technicians to continuously improve my DFM and improve company manufacturing techniques.
- Personally led development of Digital Work Instruction transformation, standardized instructions and allowed for ME R&D.
- Developed & Designed COPV cleaning process from RCA, product validation, to final implementation & handoff.

Purdue Aerial Robotics Team (PART)

January 2025 – Present

Incoming President | R&D Testing Team Lead

West Lafayette, IN

- Led team of 15 members in carbon fiber composite structures, wind tunnel, and aircraft design testing.
- Decreased unintended wing flex by 75% with carbon fiber layups to reduce wingtip stress during flight testing.
- Trained members on fuselage composite manufacturing technique while rapidly solving unexpected problems.
- Designing and testing 10ft wingspan VTOL autonomous payload delivery aircraft for SUAS/C-UASC competition.

Purdue STARS Semiconductor Manufacturing Internship

June 2025 – August 2025

Semiconductor Manufacturing Research Intern

West Lafayette, IN

- Led 5 interns to characterize MIM capacitors and etch rate of 4 dielectric materials on silicon substrate.
- Specialized in Photolithography, PVD, and ALD processes depositing nanoscale repeatable patterned layers.
- Certified in ISO Class 3 Cleanroom, semiconductor manufacturing processes, photolithography, vapor deposition.
- Communicated findings weekly to ensure work could adequately continue in the fall, final poster presentation.

Purdue University - S.C.A.L.E.

January 2025 – Present

Research Assistant - Specht Lab X-Ray Spectroscopy and Radiation Shielding Solutions

West Lafayette, IN

- Using X-Ray Spectroscopy to detect lead in human bones and prove the technology for further use.
- Designed user friendly MATLAB program to quantify lead (Pb) detection, proving 14''+ of topsoil penetration.
- Presented and defended findings at spring 2025 undergraduate research conference to determine future goals.

Volunteering and Personal Projects

Purdue Student Engineering Foundation (PSEF) | Outreach Committee Member

September 2024 – Present

- Giving 1-hour long engineering tours to groups of 25+ prospective families while enhancing public speaking skills.
- Became a critical resource for families through answering questions about college and life at Purdue.

Custom Drone Design and Manufacturing | Personal Project

Summer 2025 - Present

- Designed, adapted, and manufactured a 5" 75+mph carbon fiber drone to use as testbed for experimentation.
- Programmed autopilot, digital video transmission, flight controllers, PID tuning, to maximize effective flight time.
- Designed and manufactured additively manufactured custom parts and measured effects on flight performance.

Hans Auto Technology Service Specialist | Personal Project

June 2023 - Present

- Used passion for PC building as a resource for local business by building and setting up 4 workstation computers.
- Hosted and managed script-based Linux servers (OpenBSD, Ubuntu Server, SUSE).
- Local and remote server connection (Putty, WinSCP) for wireless network setup to reduce costly \$1000+ wire runs.

Relevant Coursework

Honors Engineering Program (ENGR 161/162)

Controls Software Engineering Lead

- PID optimization and robot controls for prototype Mars rover using Python & MATLAB proving design validity.

CAD Graphic Communication & Spatial Analysis (MFET 163)

Siemens NX + Teamcenter PLM

- Worked with Product Data Management system Siemens Teamcenter to control workflow and simulate industry.