

Paul Schwartz

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Mechanical Engineering student (Non-Destructive Evaluation minor) seeking a spring/summer 2027 internship in an advanced automotive or aerospace setting. Hands-on experience designing, prototyping, and building across aerospace and utility industries; as well as extensive Formula SAE experience supporting suspension development.

Education

Iowa State University | Ames, IA

Expected Graduation December 2027

BS in Mechanical Engineering, Minor in Non-Destructive Evaluation

GPA: 3.6

Professional Experience

R&D Design Engineering Intern | *Honeywell Technologies* | Raleigh, NC

May 2026 - Present

- Engineered PCB-clipping probe in three days using SolidWorks and rapid FDM prototyping, avoiding over \$30k in injection molding re-tooling costs while securing critical Canadian market compliance for A4 Pro meter
- Eliminated >50% boss-cracking failure rate by validating M3 screw pullout force using a Mark-10 Force Tester and custom FDM fixture; created engineering report to secure management approval for a larger ID design
- Redesigned injection molded bracket clips to fix GTEM-test failures while retaining initial stiffness characteristics through SolidWorks Simulation validation
- Executed tolerance stack-up and 3D scan analysis to validate CAD, preventing multi-month production delays

Manufacturing Engineering Co-op | *Collins Aerospace* | Cedar Rapids, IA

January - August 2025

- Oversaw all tooling and fixture creation through SolidWorks & FDM 3D-printing; designed and implemented 20+ fixtures for ergonomics, usability, and accuracy, saving \$40k/year and improving validation efficiency
- Developed CircuitWorks/SolidWorks-designed CNC-milled fixtures for reworkable underfill technology in high-defect boards, saving \$400k/year
- Headed custom plier creation for removal of Samtec flex cables during build and repair, eliminating error along x- and y-axis causing pin defects and greatly improving ergonomic conditions
- Designed and implemented vacuum lift safety net to protect amplifier & operator, saving \$400k+ each potential drop

Manufacturing Intern | *Allsteel* | Muscatine, IA

May - August 2024

- Performed standardized quality inspections on production units, specifically Cobot welder and furniture tolerances

Produce Courtesy | *Fareway* | Ames/Bettendorf, IA

July 2019 - November 2024

Clubs and Projects

Suspension Design and Manufacturing Engineer | *Formula SAE at Iowa State*

June 2026 - Present

- Developing metal 3D-printed wishbone connections to greatly reduce manufacturing time and accuracy for 2026/27
- Adapting previous car for front direct-acting suspension case study; validated CAD model under a 2-week timeline

Suspension Member | *Formula SAE at Iowa State*

August 2024 - Present

- Orchestrated laser-cut sheet metal/FDM 3D-printed drill jig to efficiently and accurately mount parts for first EV car
- Managed A-arm clevis development for variable anti-dive parameters to improve vehicle dynamics during testing
- Initiated clevis unification to improve drawing creation efficiency and part manufacturability by two days; taught peers SolidWorks and Ansys to support cause
- Helped create technical documentation for competition-level RFQ, including detailed engineering drawings

Certified SolidWorks Professional | *SolidWorks Club at Iowa State*

August 2024 - Present

- Developing collegiate students through teaching advanced CAD geometries for certification exams

Skills and Other Involvements

- Engineering Visit Day at Bettendorf Middle School, 2023
- Muscular Dystrophy Association Camp Courageous Volunteer, 2023
- CAD Software: SolidWorks (CSWP), CircuitWorks, AutoCAD, Fusion 360, Ansys
- Other Software: Teamcenter, 3DEXperience, Jira, Microsoft Office, MATLAB, Excel VBA, PDM
- Manufacturing: FDM 3D-printing, soldering, wood/metal fabrication, rapid prototyping, GD&T
- Hobbies/Interests: racing, airplanes, St. Louis sports teams, weightlifting, traveling, museums