

# Paul Schwartz

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## Objective

Mechanical engineering and NDE student with aerospace, automotive, and additive manufacturing experience seeking a 2026 summer internship or fall co-op to design and build innovative mechanical parts and systems.

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## Education

*Iowa State University, Ames, Iowa*

Expected Graduation December 2027

BS in Mechanical Engineering, Minor in Non-Destructive Evaluation

GPA: 3.66

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## Engineering Experience

*Collins Aerospace, Engineering Co-op, Cedar Rapids, Iowa*

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
- Conducted development and procurement of CircuitWorks/SolidWorks-designed CNC-milled fixtures for reworkable underfilling technology in high-defect boards, saving \$400k/year
- Headed custom pliers 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
- Directed THAAD tinning fixtures project; oversaw design, GD&T, and coordination under a critical deadline

*Summer Seasonal Manufacturing Intern, Allsteel, Muscatine, Iowa*

May - August 2024

- Utilized machines such as robot welders, disc grinders, sanders, dies, and presses to efficiently produce product
- Performed quality inspection and standardization tests for production units

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## Projects and Clubs

*Formula SAE at Iowa State - Suspension Subsystem Member*

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 while testing
- Initiated suspension clevis unification, teaching members SolidWorks & Ansys and improving drawing efficiency and manufacturability while exploring DLMS 3D-printing options
- Utilized SolidWorks and Ansys to develop a clevis knuckle attachment for rear pushrod geometry, eliminating unreliable spherical bearing from previous vehicle design

*SolidWorks Club at Iowa State - Certified SolidWorks Professional*

August 2024 - Present

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

*Formula SAE at Iowa State - Powertrain Subsystem Member*

August 2023 – May 2024

- Measured and re-rendered specific engine parts in SolidWorks for CR-28
- Collaborated to design a dry sump oil system, allowing car to corner without oil pressure “dropping” issues

*Quad City Engineering and Science Council Tech Challenge - 1<sup>st</sup> Place Overall*

January - May 2023

- Directed student engineering teams through regional competitions, earning 1<sup>st</sup> overall for 807%-efficient popsicle-stick bridge, 82%-accurate wooden egg-launch trebuchet, and successful participation in cardboard boat regatta

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## Other Work Experience & Involvements

• Engineering Visit Day at Bettendorf Middle School

March 2025

• Produce Courtesy at Fareway Grocery, Ames and Bettendorf, Iowa

July 2019 - November 2024

• Muscular Dystrophy Association Camp Courageous Volunteer

June 2023

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## Skills

- CAD Software: SolidWorks (CSWP), CircuitWorks, AutoCAD, Fusion 360, Ansys
- Other Software: 3DEXperience, Jira, Microsoft Office, MATLAB, Excel VBA, PDM
- Manufacturing: FDM 3D-printing, soldering, wood/metal fabrication, rapid prototyping, GD&T
- Hobbies/interests: racing/automobiles, airplanes, CAD, 3D-printing, weightlifting, sports, traveling