

TOM TIGER

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EDUCATION

University of Memphis, Memphis, TN
Bachelor of Science, Mechanical Engineering

Expected Graduation: May 2026

- GPA: 3.6/4.0
- Relevant Coursework: Thermodynamics, Fluid Mechanics, Heat Transfer, Mechanical Design, Dynamics, Materials Science, Machine Elements, CAD/CAE, Manufacturing Processes

RELEVANT EXPERIENCE

AAON, Inc., Memphis, TN
Mechanical Engineering Intern

May – August 2024

- Created and modified 3D CAD models and 2D drawings in SolidWorks for mechanical components
- Conducted finite element analysis (FEA) to verify stress and deformation under loading conditions
- Participated in design reviews and implemented design-for-manufacturability (DFM) improvements that reduced part cost by 12%
- Assisted with testing procedures, including tensile, vibration, and thermal testing of prototypes

University of Memphis, Mechanical Engineering Department
Undergraduate Research Assistant

August 2023 – Present

- Supported experiments involving heat exchanger performance and airflow dynamics
- Collected and analyzed thermal data using MATLAB and Excel; contributed to a conference poster on efficiency improvements

PROJECTS EXPERIENCE

Formula SAE Chassis Design (Team of 8)

Fall 2024

- Modeled a lightweight tubular space frame using SolidWorks; reduced weight by 10% while maintaining stiffness
- Performed stress analysis using ANSYS and optimized weld joints for safety and performance
- Collaborated with electrical and drivetrain teams to ensure systems integration

3D-Printed Gearbox Prototype

Fall 2023

- Designed a compact planetary gearbox for a robotic arm using Fusion 360
- 3D printed and tested the assembly, achieving a 4:1 gear ratio with less than 5% backlash
- Documented full design process and presented findings in a departmental showcase

TECHNICAL SKILLS

- **Software:** SolidWorks, ANSYS, MATLAB, AutoCAD, Fusion 360, Python (basic), Excel (advanced), GD&T
- **Manufacturing Tools:** CNC Machines, Lathes, Milling Machines, 3D Printers, Calipers, Micrometers
- **Testing/Analysis:** FEA, CFD (intro), Thermal Testing, Strain Gauges, Force/Torque Analysis
- **Certifications:** OSHA 10-Hour, CSWA – SolidWorks, MATLAB Onramp

CERTIFICATIONS & AFFILIATIONS

- Student Member, ASME (American Society of Mechanical Engineers)
- Member, Society of Automotive Engineers (SAE)
- Certified SolidWorks Associate (CSWA) – 2024
- Fundamentals of Engineering (FE) – Scheduled Jan 2026