

Jake Mahoney

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EDUCATION

Michigan Technological University

B.S. Mechanical Engineering, GPA: 3.56/4.0

Houghton, MI

Expected December 2026

EXPERIENCE

McLaren Engineering

Mechanical Engineering Intern, Business Pursuit

Livonia, MI

Summer 2026

- Eliminated a \$10,000/yr GT-RealDrive license by building a free tool that uses public GPS data to generate drive cycles
- Reduced early-stage simulation time from 6 hours to 20 minutes by programming a VBA simulation tool in Excel
- Simulated mode shapes using SolidWorks to identify damaging resonances in a prototype rear axle

Kohler

Accelerated Engineering Intern, New Product Development

Kohler, WI

Summer 2025

- Solved a problem identified in consumer research by inventing, designing, and prototyping a sound-lighting product
- Earned the Kohler Boldly Innovate award by demonstrating prototype concepts that led to lighting patent disclosure
- Created service materials for the service representatives that address concerns from the customer's perspective

Innotec

Mechanical Engineering Intern, Process Development

Zeeland, MI

Summer 2024

- Delivered new manufacturing parameters and 400 sample parts to target new business by leading an intern team through experimental trials
- Raised the facility audit score 12% by implementing three new maintenance procedures and twelve 5S projects

Independent Contracting

CNC Woodworking

Grand Haven, MI

Fall 2021 – Present

- Produce low-volume manufacturing tools for automotive paint lines with shipments to Tesla in California and Texas
- Decreased tool production time 23% by implementing high-density workholding and lean manufacturing jigs

RESEARCH

Michigan Technological University

Undergraduate Research Fellow, Michigan Technological University

Houghton, MI

Spring 2026 – Present

- Developing sonar methods for ice and shallow water sensing that align with Office of Naval Research (ONR) interests
- Authored proposals to secure funding through Michigan Tech Research Experience for Undergraduates (REU)

LEADERSHIP

Audio Engineering Society, MTU Student Chapter

Treasurer, Vice President, President

Michigan Tech

Fall 2024 – Spring 2026

- Designed custom snow speakers for a Winter Carnival 6-DJ headlining event and negotiated a Red Bull partnership coordinating the distribution of 2,500 cans
- Increased club activity by raising \$7,500 to fund engineering projects and replace aging audio gear

Society of Manufacturing Engineers, MTU Student Chapter S077

Treasurer, Vice Chair, Chair

Michigan Tech

Fall 2024 – Fall 2026

- Launched a 3D printing service for research and capstone teams by raising \$5,700 for machines not available on campus
- Prioritized community interaction by organizing student volunteer events at the local middle school's makerspace

SKILLS

Design & Simulation: Creo, SolidWorks, Inspire, topology optimization, MATLAB

Fabrication: CNC router, milling, FDM/MSLA 3D printing, composites, CO2 laser, welding, soldering

Acoustics & NVH: Simcenter Testlab, experimental modal analysis, room acoustic design

Mechatronics: Raspberry Pi, digital signal processing, servo and stepper drive control, ESCs, amplifiers