

Jimmy Pare

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Education

The University of Vermont

Aug 2022 - May 2026

BS, Mechanical Engineering

- **GPA:** 3.78 Cumulative
- **Achievements:** Dean's List, 2023-2026

Skills

- **Simulation & FEA:** ANSYS (Mechanical, Fluent, Workbench), ABAQUS
- **CAD Software:** SolidWorks, AutoCAD, Onshape, CATIA (Basic)
- **Programming:** Python, C++
- **Technical Skills:** Hand & power tools, manual machining, CNC laser cutting, 3D printing, woodworking, metrology tools

Experience

GlobalFoundries

May 2025 - Aug 2025

Equipment Engineering Intern

- Troubleshoot and repaired motors for exhaust ventilation, saving \$2,300 per motor.
- Installed data acquisition cards, industrial computers, and data processing software to relay critical information in an efficient and secure manner.
- Implemented IPA and nitrogen flow detection on semiconductor manufacturing equipment, enhancing tool performance in technical environments through system integration and debugging processes.
- Applied statistical process control to monitor tool health, enabling early detection of performance drift and decreasing unplanned downtime.

Jimmy's Home and Yard Care

Jul 2022 - Present

Owner

- Founded and currently manage a general contracting business serving 100+ clients across three counties, including many repeat customers. Primary workload consists of carpentry, drywall, painting, and flooring.
- Oversaw maintenance of 12 estates in 2024 and handled all aspects of operations, including client communication, budgeting, and project execution.

Ace Hardware

Jan 2021 - Jun 2021

Sales Associate

- Resolved customer concerns efficiently in high stress situations while maintaining professional demeanor.

Bruley & Bruley Construction

Jun 2020 - Aug 2021

General Laborer

- Assisted in a wide range of construction processes including carpentry, drywall, and painting.

Projects

Multiphysics Simulation of Turbine Blade

Computational Solid Mechanics

- Developed a multi-physics finite element model of a jet turbine blade in FEA Software Abaqus, coupling thermal loading and centrifugal forces to evaluate stress, strain, and displacement under high-temperature rotating conditions.
- Performed pre-stressed vibrational analysis across multiple RPM and temperature cases.

Structural Analysis Competition

Prime Engineering

- Winner of Prime Engineering's regional Finite Element Analysis competition.
- Competition consisted of performing FEA to determine the maximum weight a nuclear payload supporting structure could bear.

Senior Capstone

Aug 2025 - May 2026

The CoCo Bar VT

- Developed an automated laser engraving system with a focus on manufacturability.
- Electromechanical design operates using a microcontroller, solenoid actuation, and a rail system for capacity.

Certifications

- **ABAQUS:** UVM Department of Engineering
- **CATIA Fundamentals:** Great Learning Academy (Online Certificate)