Matthew Nutbean

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Education

Bachelor of Science in Engineering — Mechanical Engineering with Distinction   June 2025
University of Manitoba
GPA: 4.1
Concentration: Aerospace Stream

Technical Skills

CAD: Onshape, SolidWorks
Programming: MATLAB, Python
Manufacturing: Laser cutting, 3D Printing, woodworking
Tools: Git, Excel, LabVIEW

Projects

Autonomous Rover Project (Pathfinder)   2024–2025
Mechanical Design Lead

- Designed drivetrain and suspension system using SolidWorks for off-road terrain navigation
- Performed stress analysis using FEA to validate structural components
- Coordinated mechanical subsystem integration with electrical and software teams

Senior Design Capstone Project   2024

- Developed thermal management system for electronic enclosure using CFD analysis
- Fabricated prototype using additive manufacturing techniques
- Reduced operating temperature by 18% compared to baseline design

Research and Lab Experience

Mechanical Engineering Research Lab   2023–2024
Undergraduate Research Assistant

- Conducted experimental testing on rotating machinery systems
- Collected and analyzed vibration data using MATLAB
- Designed custom test fixtures to improve measurement accuracy

Additional Information

Interests: Aerospace Systems, Robotics, Mechanical Design, Automation