

Jordan Vanriel

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Professional Summary

Mechanical Engineer with 4+ years of experience driving innovative hardware products from concept through to mass production. Proven ability to lead cross-functional teams, integrate customer and stakeholder feedback, and deliver cost-effective, high-performance mechatronic and electro-mechanical systems. Deep knowledge of DFM/DFA, global manufacturing coordination, and iterative prototyping. Passionate about creative product development that balances fun, function, and manufacturability.

Skills

Technical Design Tools: SolidWorks, Blender, AutoCAD, Inventor, OnShape, Arena Simulation

Programming & Data Tools: Excel/VBA, Python, C

Fabrication & Manufacturing: 3D Printing, Composites, Injection Molding, HVAC, CNC, Laser Cutting, Metal Lathes

Project & Product Operations: BOM Management, Supplier Communication, Packaging Design, Design Package Development, Contract Manufacturing Management, FMEA

Work Experience

Mechanical Engineer June 2021 - Present

Mosaic Manufacturing - Toronto, ON

- Spearheaded mechanical design and DFM for Mosaic's Array multi-material 3D printing platform, resulting in over 30 global commercial deployments.
- Designed and validated 40+ structural, thermal, and mechanical components optimized for injection molding and CNC processes.
- Owned BOM development (450+ components, \$150K+) and managed system-level product testing (thermodynamics, statics, vibration).
- Led pilot production ramp-up: authored work instructions, trained contract manufacturers, and supported remote onboarding.
- Developed scalable packaging and conducted global logistics planning; resolved field issues through structured troubleshooting.
- Explored and evaluated new technologies and component architectures to increase throughput and reliability.

Process Engineering Intern Summer 2020

Yanfeng Automotive Interiors - Mississauga, ON

- Automated statistical process control using a custom Excel/VBA capability study tool adopted across all injection molding lines.
- Diagnosed and resolved molding defects affecting high-volume production for Ford and Lexus interior panels.
- Gained practical exposure to mold tuning, press tooling, cycle optimization, and root cause analysis.

Engineering & Quality Intern Summer 2018 & 2019

Martinrea International (Automotive) - Vaughn, ON

- Led redesigns of weld fixtures and storage systems to improve ergonomics, reduce cycle time (–3s), and free up floor space.
- Designed and prototyped components for an autonomous mobile robot project (200 lb payload @ 2 m/s).
- Used 5S principles to streamline weld cell operations, reducing paperwork clutter and improving workflow efficiency.

Education

Bachelor of Engineering (B.Eng), Mechanical Engineering - Mechatronics Specialization 2021 Graduate

Toronto Metropolitan University

- Placed 3rd in the Thales IOT Innovation Competition to create a solution for IOT cybersecurity
- Relevant coursework: Mechanical Design, Heat Transfer, Control Systems, Robotics, CAD, Thermodynamics

Projects & Leadership

Mechatronic System Lead

Winter 2021

HVAC Capstone Project with Cadillac Fairview

- Developed an 80% accurate Random Forest ML model to predict tenant comfort
- Designed a Python-based UI to visualize and query HVAC predictions for the TD Center in Toronto

Robotic Manipulator Design Project

Winter 2021

Design of Robotic Manipulators

- Simulated an anthropomorphic 3-axis robot in MATLAB/Simulink; implemented PD + gravity compensation and inverse dynamics control strategies.

Co-Founder & Interiors Team Lead

January 2018 - 2022

Helium Aero (Aerospace)

- Led the design and fabrication of a carbon fiber prototype vehicle interior showcased in Silicon Valley
- Designed CAD molds and used composite techniques, 3D printing, CNC, and laser cutting for manufacturing