JUSTIN NEHME

Mechanical Engineering | Mechatronics & Robotics | Mechanical Design | Manufacturing

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PROFESSIONAL SUMMARY

Mechanical Engineering candidate with experience in aerospace and defence manufacturing, industrial equipment, robotics, mechanical design, and engineering automation. Skilled in CAD, GD&T, production process planning, custom tooling, rapid prototyping, embedded systems, and hands-on troubleshooting. Combines technical design and manufacturing work with customer-facing experience and independent business ownership. Fluent in English and French.

EDUCATION

Concordia University | Gina Cody School of Engineering and Computer Science **2021 – 2026**

Bachelor of Engineering, Mechanical Engineering | Montreal, QC

John Abbott College | DEC, Pure and Applied Sciences (2018 – 2021); prior Graphic & Web Design studies (2017 – 2018)

ENGINEERING EXPERIENCE

Les Technologies KK | *Île-Perrot, QC* **Feb 2026 – Present**

Manufacturing Engineering | Aerospace & Defence Components

- Evaluate engineering drawings for GD&T, tolerance requirements, machining feasibility, CNC setups, and tooling constraints.
- Create and revise manufacturing process plans with engineers and CNC programmers; coordinate with CMM inspection to resolve production discrepancies.
- Design manufacturing fixtures and aids, including tooling to correct 6061-T6 aluminum deformation, a thermal-material die cutter, and 3D-printed CNC loading components.
- Developed a bilingual digital process-sheet generator for production routings, operation templates, critical-to-quality checks, inspection requirements, and revision tracking.
- Work with aerospace/military finishing specifications, including MIL-PRF-22750G and MIL-DTL-53022E; gained shop-floor exposure to 5-axis machining, Mastercam, laser marking, and assembly.

WAJAX – Delstar Énergie | *Montreal, QC* **Aug 2023 – Dec 2023**

Mechanical Engineering Intern

- Designed tooling and fixtures, including ABB robotic taping components and lifting equipment for motor poles weighing up to 800 kg.
- Supported sensor integration and troubleshooting on an automated induction brazing machine and other factory equipment.
- Worked on General Electric AC–DC converter assemblies using SOLIDWORKS and Inventor for CAD design and diagnostics.
- Maintained a 3D-printer farm and worked with CNC equipment, drill presses, automatic saws, and production machinery.

TECHNICAL SKILLS

CAD & engineering: SOLIDWORKS, Autodesk Inventor, Fusion 360, AutoCAD, FEA, 3D assemblies, BOMs, DFM/DFA, product and fixture design.

Manufacturing: GD&T, print interpretation, process planning, CNC / 5-axis exposure, Mastercam exposure, CMM collaboration, additive manufacturing, prototyping and assembly.

Electronics & software: Arduino, ESP32, C++, sensors, embedded system integration, production-document automation, Microsoft Office, Adobe Creative Suite.

Languages: English and French (fluent).

SELECTED ENGINEERING PROJECTS

Walter – Underwater Robotic Cleaning & Coin-Recovery System | *Capstone Design, 1st Place*

- Co-developed a semi-autonomous underwater robot integrating propulsion, suction, electronics, embedded control, and 3D-printed mechanical assemblies.
- Contributed SOLIDWORKS design, embedded programming, wired control integration, prototyping, and pool-system testing.

Indestructabox – Impact-Resistant Enclosure | *Engineering Design*

- Designed an enclosure for a simulated 40 km/h vehicle impact using 3D CAD, FEA, BOM management, and design iteration.

Thermoelectric Vehicle | *Engineering Design*

- Optimized a 3D-printed vehicle frame and thermal drivetrain for speed, reduced weight, and energy efficiency.

Soap Press & Product Development | *Mechanical Design*

- Built a functional 3D-printed press using machine-element calculations and FEA; applied DFM/DFA to product design, CAD modeling, and rendering.

ADDITIONAL PROFESSIONAL EXPERIENCE

Canadian Tire | *Montreal, QC* **Jan 2022 – Aug 2023**

Automotive Parts Advisor

- Advised customers on automotive parts and maintained warehouse operations, inventory, and parts software records.

Mike's Auto Spa | *Montreal, QC* **Jun 2019 – Jun 2021**

Automotive Detailer & Parts Technician

- Performed detailing and paint/ceramic-coating work, automotive trim/electrical installations and soldering; helped attract customers through social media.

Justin's Repair Shop | *Montreal, QC* **Jun 2016 – Aug 2018**

Founder & Lead Technician

- Repaired consumer devices, sourced replacement parts, managed inventory, and acquired clients through referrals and marketing.

Honda Des Sources | Jun – Aug 2021: Vehicle preparation, paint correction, automotive detailing, and protective finish treatments.

Nautilus Plus | Sep – Dec 2018: Sales Representative: quoted and sold gym memberships and provided customer service.

Tim Hortons | Aug – Dec 2018: Cashier: customer service, food preparation, and cleaning/maintenance coordination.

LEADERSHIP & COMMUNITY INVOLVEMENT

Community service: 250+ volunteer hours; taught cooking classes with WIAIH and participated in a humanitarian building project in the Dominican Republic.

Entrepreneurship & leadership: Vice-President, Technology & Marketing, Beyond the Cream student venture; helped raise $1,500+ for Make-A-Wish (2017).

Robotics: Member, Mechanical CAD team, Loyola High School Robotics Club (2012 – 2016).