

Vedika Singh

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Skills

Operations: Root Cause Analysis, Process Capability & Design, KPI Analysis, Lean & 5S Implementation, Quality Management, PFDs & P&IDs
Tools & Softwares: MATLAB, AutoCAD, SolidWorks, Aspen Plus, SAP, Excel Solver & VBA, Python, GitHub, Jupyter Notebook, Microsoft Office

Work Experience

Toyota Motor Manufacturing Canada (TMMC)

Woodstock, ON

Pilot Plastics Engineering Analyst

September 2025 - December 2025

- Developed TMMC's first backup Heads-Up Display trim process using a hydraulically actuated router fixture; demonstrated process capability (Cpk) with a **30-part** study, approved by Quality & Safety and increased backup coverage by **11%** for 2026 RAV4 production.
- Designed and 3D-printed **6+** production-ready sonar installation tools for the new RAV4 model using SolidWorks, incorporating a pressure indicator to standardize operator-applied force; touch testing confirmed **>90%** adhesive transfer for each tool.
- Coordinated resin material changeover for new instrument panel production, calculating order quantities using material density and per-vehicle consumption, overseeing hopper, line, and silo cleaning, and confirming **zero** contamination prior to production.
- Led **15+** weekend production jobs in preparation for upcoming vehicle launch, coordinating contractor work to add essential power to critical systems, collaborating with a P.Eng on structural modifications, and supporting PLC-integrated vision system configuration.
- Tested static grounding methods on **20+** plastic parts using resistance and continuity checks to support paint booth safety validation.

PepsiCo Foods Canada

Lethbridge, AB

Manufacturing Supervisor and Supply Chain Leader

January 2025 - April 2025

- Supervised a team of **25+** frontline workers, managing and resolving over **30** product holds, safety events, and personnel issues.
- Collaborated with Warehouse, Maintenance, Product Supply & Quality to support supply flow, equipment uptime, and output reliability.
- Created and implemented a VBA tool that enabled frontline staff to independently verify product changeover cleaning steps, reducing cleaning-related overtime by more than **3 hours** per week.
- Enhanced sanitation practices by identifying changeover gaps and introducing **6+** shadow boards to the production floor.

Redstone Foods

Mississauga, ON

QA/QC Process Engineering Intern

May 2024 - August 2024

- Conducted **50+** daily food product QA inspections, and daily site assessments, ensuring safety and specification compliance.
 - Conducted allergen swabbing, equipment verifications, and **20+** instrument calibrations per Standard Operating Procedures.
 - Completed **5+** AutoCAD plant layout drawings by integrating process flow lines to enhance efficiency in operational planning.
 - Led GMP and Health & Safety training for **100+** employees, ensuring compliance with plant operation safety protocols.
 - Nominated by supervisor for the Co-op Student of the Year Award based on an outstanding performance during the term.
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Projects

Packaging Labour Efficiency Calculator

PepsiCo Foods Canada

- Developed a calculator using Excel VBA to measure packaging labour efficiency by comparing cases produced to labour hours used.
- Utilized by management to identify bottlenecks and implement data-driven solutions to improve operational performance.

Proper Waste Disposing System - Sustainability Hackathon Winner

GreenHouse

- Developed an interactive program using JavaScript and HTML/CSS to gamify the garbage sorting process in residences.
- Assembled an Arduino-based motion light detector prototype, integrating sensors and LEDs, thus securing second-place.

"Digile" Game Development

University of Waterloo

- Built a Python number-guessing game with randomized state generation, input validation, scoring logic, and gameplay loops using Git.
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Extracurricular Activities

- Women in Engineering** Class Representative (January 2026 - Present) & **ChemEng Society** Marketing Director (April 2025 - Present)
 - Sanford Fleming Foundation Debate Competition **Second Place Winner** (July 2025)
 - Engineering Society **Sustainability & Bioengineering Competition** Director (April 2025 - September 2025)
 - University of Waterloo **Engineering Ambassador** (September 2023 - Present): Engage 200+ students with outreach events & panels.
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Education & Awards

University of Waterloo

Waterloo, ON

Bachelor of Applied Science in Chemical Engineering (Co-op Program)

2023 - 2028 (Expected)

Awards/Scholarships: **Sooi Chong Entrance Scholarship in Chemical Engineering** (\$5,000), **Canada Post Scholarship** (\$6,000)