

Peter Marchut

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Summary

Mechatronics Engineering graduate (April 2026, Ontario Tech University) with manufacturing engineering experience supporting Canada's nuclear industry at BWXT Nuclear Energy Canada and previous experience supporting undergraduate engineering laboratories. Strong foundation in mechanical engineering, instrumentation & control, laboratory operations, equipment maintenance, engineering documentation, testing, and regulated engineering environments. Proven ability to troubleshoot technical issues, support multidisciplinary engineering projects, and collaborate effectively with students, faculty, and cross-functional engineering teams.

Education

Bachelor of Engineering (Honours), Mechatronics

Graduated April 2026

Ontario Tech University, Oshawa, ON

Relevant Coursework: Computer-Aided Design, Solid Mechanics, Dynamics, Fluid Mechanics, Sensors and Instrumentation, Automatic Control Systems, Actuators and Power Electronics, Industrial Automation

Technical Skills

- **Mechanical Engineering & Design:** SolidWorks (CSWA Certified), engineering drawings, mechanical assemblies, prototype fabrication, design for manufacturability, GD&T fundamentals, tolerance analysis
- **Laboratory Operations:** Laboratory equipment setup, preventative maintenance, equipment maintenance, equipment troubleshooting, laboratory safety, technical documentation, undergraduate laboratory support
- **Instrumentation & Controls:** Sensors and instrumentation, actuator and motor control, embedded controllers, automatic control systems, industrial automation, data acquisition
- **Engineering Documentation:** Manufacturing routing packages, technical reports, test procedures, compliance documentation, schematics and wiring diagrams
- **Programming:** Python, C, C++, Java, Arduino, ESP-based microcontrollers
- **Regulated Engineering Environments:** Canadian nuclear quality management systems, engineering change control, non-conformance investigations, corrective action processes, CANDU familiarity

Professional Experience

Manufacturing Engineering Intern

2024–2025

BWXT Nuclear Energy Canada — Peterborough, ON

- Coordinated qualification testing of nuclear motor assemblies for Ontario Power Generation under C2 contaminated materials conditions, ensuring compliance with customer requirements, quality standards, and project schedules.
- Authored manufacturing routing packages, engineering process documentation, and production instructions in accordance with BWXT's Quality Management System and Canadian nuclear regulatory requirements.
- Supported engineering investigations into technical issues, non-conformances, and corrective actions through collaboration with engineering, quality, production, procurement, and customer stakeholders while gaining experience with engineering change control processes.
- Supported engineering estimates, procurement specifications, and technical documentation for nuclear power industry components, contributing to proposal development and project execution.

Engineering Laboratory Assistant

2022–2023

Ontario Tech University — Oshawa, ON

- Supported undergraduate teaching laboratories through equipment setup, maintenance, preventative maintenance, troubleshooting, and technical support for laboratory instruction and student engineering projects.
- Designed, assembled, tested, and maintained an interactive model analogous to a CANDU reactor core demonstrating reactor control system fundamentals using mechanical assemblies, instrumentation, actuators, and embedded control systems.
- Supported expansion of the Jeffery Boyce Student Design Studio through laboratory equipment procurement, installation, organization, and continuous improvement initiatives supporting undergraduate engineering design activities.
- Prepared laboratory documentation, safe operating procedures, and equipment instructions while providing laboratory safety guidance and technical support to students and faculty.

Manager, Vendor Analytics and Reporting

2017–2021

Rogers Communications — Toronto, ON

- Hired, managed, and mentored a team responsible for operational analytics, technology solutions, reporting systems, and vendor performance measurement.
- Delivered executive-level technical presentations and analytical reports to Senior Managers, Directors, and the President of Consumer Business, translating complex technical information into actionable business decisions.
- Led implementation of reporting technologies and continuous process improvements that increased operational efficiency, expanded self-service capabilities, and improved enterprise-wide access to operational data.

Engineering Projects

- **Assistive Robotic Arm (Capstone Project — 3rd Place)** — Designed, integrated, tested, and validated mechanical assemblies, actuators, sensors, embedded controls, and computer vision to improve system reliability and human–machine interaction.
- **Autonomous Mobile Delivery System** — Designed and built a mobile robotic platform integrating mechanical design, embedded control, sensor fusion, and autonomous navigation using multidisciplinary engineering principles.
- **Machine-Vision Speed Enforcement Prototype** — Designed, implemented, and validated an instrumented computer vision system emphasizing data acquisition, structured testing, system reliability, and engineering validation.

Leadership & Affiliations

- Board Member, Ontario Tech University Board of Governors (2024–2025)
- Class Representative, Faculty of Engineering — Mechatronics (2022–2026)
- Technical Advisory Board Member, Kids Help Phone (2019–2020)
- Head/Assistant Coach, Clarington Baseball Association (2022–2026)

Certifications & Professional Development

- SolidWorks Certified Associate (CSWA) — Dassault Systèmes (2021)