William Nagassar

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EDUCATION

Ontario Tech University, Oshawa, ON — Expected April 2027
Bachelor of Mechanical Engineering

WORK EXPERIENCE

Special Projects Engineering Intern, Modern Niagara, Vaughan, ON — May 2025 - August 2025

- Interpreted **mechanical design drawings** and **specifications** for HVAC and plumbing systems to support construction execution and ensure alignment with design intent
- Recommended product substitution which reduced lead time from 16 to 8 weeks while maintaining compliance with design and performance criteria
- Used Bluebeam and **Navisworks** to review **shop drawings**, locate equipment, and **interpret 3D models**
- Conducted daily site walks and captured 360° progress imagery via OpenSpace, gaining direct exposure to real-world construction and installation practices
- Submitted and revised **technical submittals** for mechanical equipment using Procore, collaborating with vendors to confirm performance specifications and resolve discrepancies
- Drafted and submitted an **RFI** regarding water meter sizing after identifying that the city-specified meter only accounted for full peak flow demand across the domestic service and neglected the chilled water system

Technology Development Team, Ontario Tech Space and Rocketry, Oshawa, ON — May 2025 - Present

- Leading development of a solid fuel test vehicle for validating jet vane thrust vector control technology
- Applied **DFM** and **DFA** principles along with 3D printing to **design** and manufacture rocket components including nosecone and payload bay lid
- Analyzed **aerodynamic stability** for hovering flight, comparing finless vs. finned configurations and optimizing center of gravity location
- Coordinated mounting mechanism design with jet vane mechanism team to ensure structural and thermal compatibility

PROJECT EXPERIENCE

Retractable Landing Gear Design Project, Team Lead:

- Designed a retractable landing gear system using **Siemens NX** and kinematic analysis to meet motion and structural requirements
- Produced a detailed engineering report validating design accuracy and linkage performance

Small Office Piping System Design Project, Team Lead:

- Collaborated with team of 5 to design an efficient piping system for a small, 3-story office building
- Delivered a comprehensive design report detailing **system specifications**, **performance analysis**, and compliance with City of Toronto water pressure regulations

Exoskeleton Arm with Hand Grasper Design Project, Team Lead:

- Led design and prototyping of an ergonomic exoskeleton arm using FEA, 3D printing, and GD&T for CNC-machined parts
- Oversaw all phases of the project, ensuring delivery of a functional prototype within 12 weeks

SKILLS

CAD/FEA: Siemens NX, NX FEA, SolidWorks, SolidWorks FEA, Navisworks, CATIA V5
Analysis: Circuit Analysis, Thermodynamic Cycle Evaluation, Kinematic Analysis, GD&T
Technical: EES, Microsoft Office Suite, MS Projects, Bluebeam, Working Model, Adams, Multisim, SAS
Manufacturing: Rapid Prototyping, 3D Printing, DFA, DFM
Documentation: Engineering Reports, Technical Drawings, Specifications, BOM
Programming: C++, MATLAB, Simulink, Arduino