

# GRAE PENNER

Winnipeg, Manitoba  
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## PROFILE

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Third-year Mechanical Engineering Co-op student with experience in process engineering, composite manufacturing, and aerospace R&D environments. Skilled in hands-on problem solving, technical documentation, and cross-functional collaboration. Passionate about aerospace systems and manufacturing innovation, with a strong interest in process optimization and materials development. Eager to apply and expand engineering skills in fast-paced, high-tech environments.

## EDUCATION

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**Price Faculty of Engineering University of Manitoba**  
Bachelor of Science in Mechanical Engineering - Co-op/IIP Option

Winnipeg, Manitoba  
September 2023 - May 2028

**Mennonite Brethren Collegiate Institute**  
High School Diploma

Winnipeg, Manitoba  
September 2016 - June 2023

## ENGINEERING EXPERIENCE

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**Magellan Aerospace**  
Process Engineering Intern – Co-Op

Winnipeg, Manitoba  
May 2025 - September 2025

- Supported R&D and commissioning of thermoset composite forming systems for aerospace applications.
- Helped lead a thermal survey project assessing dual-rack autoclave loading feasibility for composite parts.
- Assisted with vacuum bagging and of carbon fiber rocket components in a cleanroom environment.
- Performed metallurgical testing on nickel superalloys, analyzing laser-cut quality using microscopy techniques.
- Prepared technical reports, cost analyses, and procurement justifications; communicated directly with suppliers for equipment and material sourcing.
- Collaborated with Health & Safety and Maintenance teams to support investigations and sampling for equipment related issues.

## ENGINEERING RELATED SKILLS

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### Design & CAD:

Proficient in Autodesk Fusion 360; designed mechanical assemblies and 3D models including a functional 3D printed 6 DoF robot arm with PCB boards, automated watering system using an Arduino, and scale mechanical parts from 2D drawings.

### Project Work & Team Collaboration:

Experience in hands-on design projects including testing with anhydrous chemicals, technical reporting, and building functioning prototypes such as a bionic arm. Strong teamwork, leadership, and communication skills.

### Technical Communication:

Skilled in writing technical reports, presentations, Gantt charts, and meeting documentation. Proficient in Microsoft Word, Excel, PowerPoint, and Outlook.

### Programming:

Working knowledge of Python; developed basic automation tools and engineering calculations using Visual Studio Code.

## OTHER WORK EXPERIENCE

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### **Boston Pizza**

Line Cook

Winnipeg, Manitoba  
August 2021 - September 2024

- Operated and maintained a variety of kitchen equipment.
- Led, communicated, and cooperated in a teamwork setting.
- Adhered to all safety protocols.

### **Birds Hill Beach Concessions**

Cook

Winnipeg, Manitoba  
May 2021 - August 2021

- Prepared and handled food products to be served to customers, in an efficient manner.
- Maintained a calm demeanor in stressful fast paced situations.

## ACHIEVEMENTS & AWARDS

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### **Schulich Leader Nominee**

February 2023

- 1 of 1400 Nominees in Canada. Recognition for demonstration of excellence in the pursuit of STEM: Science, Technology, Engineering, and Mathematics.

### **MBCI Business Ventures Program Certificate**

June 2023

- The MBCI Business Ventures Program equips students with the knowledge, skills and character necessary for building business leadership roles.

### **Lynne and Dorothy Windsor Scholarship in Engineering**

September 2024

### **President's Scholarship & 23/24/25 Deans list (University of Manitoba)**

July 2025

- 4.31 grade point average (4.5 Scale)

### **Price Scholarships in Engineering**

September 2024

## VOLUNTEER EXPERIENCE

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### **Volunteer Winnipeg**

Volunteer

Winnipeg, Manitoba  
July 2019 - August 2019

- Volunteered over 40 hours at various non-profit organizations.
- Organizations include Winnipeg Harvest, Siloam Mission, Bethania Personal Care Home, Buhler Park, Agape Table, Canadian Blood Services, Ronald McDonald House, and Edventures.

## CERTIFICATIONS/MEMBERSHIPS

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### **Manitoba Class 5 Drivers License**

October 2021

### **UMSAE Baja Design Team**

Team Member

September 2024 - Present

- Member on the 2025 UMSAE Baja off road vehicle team.

### **Engineers Geoscientists Manitoba Student Member**

September 2024

### **SAE International Membership**

September 2024

### **Manufacturing Foundations Certification/Micro Credential**

Excellence in Manufacturing Consortium

June 2025

- Completed a series of self-paced e-Learning modules developed to increase awareness of the employability skills needed to be successful in the manufacturing sector.