

# HAAMSENI PRABAHARAN

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## EDUCATION

**UNIVERSITY OF TORONTO** | Toronto, ON

Sept 2023 – May 2028

*Bachelor of Engineering and Applied Sciences, Mechanical Engineering*

PEY Co-op | Minor in Engineering Business | Minor in Sustainable Energy

## PROJECTS

### CNC ROUTER DESIGN

Sept 2024 – Dec 2024

*Course: MIE243 Mechanical Engineering Design | U of T | Toronto, ON*

- Designed a 3-axis CNC Router in SolidWorks, selecting components based on safety, size, weight, and budget specifications.
- Conducted thorough research, ensuring design features and mechanisms align with client expectations.
- Applied project management techniques (Gantt charts, task allocation) to ensure timely completion for a five-member team.

### SUSTAINABILITY OFFICE: LIFE CYCLE ANALYSIS PROJECT

Jan 2024 – April 2024

*Course: APS112 Engineering Strategies & Practices II | U of T | Sustainability Office | Toronto, ON*

- Developed a platform to address questions regarding sustainability and product life cycles.
- Conducted Life Cycle Analysis of products to evaluate environmental impacts.
- Communicated project requirements and deliverables with clients, ensuring alignment with expectations.
- Prepared technical reports to support and organize design decisions.

### HART HOUSE THEATRE: ACCESSIBILITY PROJECT

Sept 2023 – Dec 2023

*Course: APS111 Engineering Strategies & Practices I | U of T | Hart House Theatre | Toronto, ON*

- Analyzed accessibility challenges at Hart House Theater and proposed feasible engineering solutions aligned with client needs.
- Collaborated with a multidisciplinary team to design a visual prototype addressing key accessibility concerns.
- Conducted research and produced detailed engineering drawings to support the prototype design.

## RELEVANT EXPERIENCES

### UNIVERSITY OF TORONTO CONSULTING ASSOCIATION: CONSULTING ASSOCIATE

July 2025 – Present

*Club | U of T | Toronto, ON*

- Conducted market research and data analysis to generate insights to address client's project.
- Collaborated in weekly team meetings and client touchpoints to align deliverables with expectations.
- Delivered midterm and final presentations to clients and executives, showcasing recommendations.

### UNIVERSITY OF TORONTO AEROSPACE TEAM: MECHANICAL TEAM MEMBER

Jan 2025 – Present

*Design Team | U of T | Toronto, ON*

- Learned and applied ANSYS simulations to evaluate structural feasibility of removing protective cases while ensuring safety of interior satellite components.
- Assisted with 3D printing and prototyping of mechanical parts to support subsystem integration and testing.
- Completed assigned tasks in a timely and organized manner, contributing to overall project milestones.

### ROBOTICS FOR SPACE EXPLORATION: ROVER ARM TEAM MEMBER

Sept 2023 – Jan 2025

*Design Team | U of T | Toronto, ON*

- Design mechanical components for the arm of the rover (battery box, robotic arm attachments) using Autodesk Fusion 360.
- Performed carbon fiber layups to fabricate lightweight and durable components for the robotic system.
- Collaborated with cross-functional teams to ensure compatibility of designs with electrical and science subsystems.

### PEPSICO KICKSTART LEADERSHIP PROGRAM: MEMBER

Sept 2024 – Jan 2025

*Program | PepsiCo Foods Canada | Toronto, ON*

- Attended workshops on leadership, networking, and professional branding.
- Gained mentorship from industry professionals and built connections across business and engineering.
- Learned about company operations, sustainability initiatives, and cross-functional collaboration.
- Delivered a comprehensive presentation summarizing key learnings and personal outcomes.

## WORK EXPERIENCES

### CAMP COUNSELLOR

June 2023 – Aug 2023

*City of Markham | Markham, ON*

- Supervised and ensured the safety of 10 children while maintain compliance with camp regulations.
- Communicated expectations and provided regular updates to parent, fostering trust and transparency.

- Maintained accurate program documentation, including incident reports, attendance logs, and daily activity records.

## ACCOUNTING ASSISTANT

June 2022 – Aug 2022

*Benson Lam CPA | Markham, ON*

- Assisted new and existing customers by providing guidance to relevant offices and resolving inquiries.
- Organized and filed general ledgers and tax receipts with accuracy and attention to detail.
- Utilized Excel and other software to perform data entry and maintain accurate records.
- Maintained confidentiality protocols and upheld compliance with customer agreements.

## TECHNICAL SKILLS & CERTIFICATES

**Design & Modeling:** SolidWorks | Autodesk Fusion 360 | Carbon fiber layup and application | 3D-Printing, **Analysis & Simulations:** ANSYS | LTSpice | Life Cycle Analysis, **Languages:** MATLAB | Python | Java | HTML | CSS, **Data & Project Management:** Power BI | Microsoft Excel Gantt charts

**CERTIFICATES:** George Brown College Machining Certificate | Certified SOLIDWORKS Associate | Certified SOLIDWORKS Professional