

SEAN HUANG

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EDUCATION

University of Toronto (September 2020 to April 2025)

- Bachelor of Applied Science in Engineering Science, Major in Aerospace Engineering

WORK EXPERIENCE

Engineering Student – Systems | MDA Space

May 2023 to August 2024

- Model-Based Systems Engineering
 - Created new SysML activity diagrams to describe system operations based on the concept of operations document to meet contractual obligation to implement model-based systems engineering (MBSE)
 - Transferred existing SysML model diagrams from legacy tool to CATIA Cameo
- Requirements Management
 - Reviewed impact assessments for 30+ subsystems to determine impact to current baseline
 - Developed new process with CSA and MDA program management for presenting requirement change information to customer on a weekly basis, used by the customer for resource planning and timely review
 - Worked with systems engineers to determine delivery dates of requirement change requests on a weekly basis
 - Worked with configuration management tools to track and facilitate approval process of requirement changes
 - Used requirement management tool to create lists of proposed requirement changes to be submitted for review and approval by the customer, based on customer and external requirements, and subject matter expert guidance
- Miscellaneous Work
 - Worked with program management to facilitate the approval process of 150+ customer deliverables to ensure timely delivery for contractual milestone (PDR); tracked the progress of 500+ deliverables
 - Delivered twice weekly virtual reality orientations of GERS to groups of 10+ MDA employees using Meta Quest headsets, brainstormed a new format for VR tours based on participant feedback
 - Created a Python script to automatically generate thermal variation graphs based on NX simulation data outputs to condense a process that previously took 8 hours into a single click

VOLUNTEER EXPERIENCE

Vice-President Student Life | The University of Toronto Engineering Society

April 2024 to Present

- Oversees 5 Project Directorships, several Affiliated Entities, and around 70 affiliated clubs and design teams
- Chair of the Clubs Affiliation Committee, ex-officio member of the Finance Committee and Executive Committee
- Ran the largest engineering clubs fair ever held, with over 90 participating groups

Hybrid Rocket Project Manager | *University of Toronto Aerospace Team*

May 2023 to August 2024

- Working with Hybrid Chief Engineer to support team leads on the construction of Defiance Mk. IV
- Completely overhauled our periodical reports to the Launch Canada competition to reflect accurate information
- Led the team to a successful launch of Defiance Mk. IV at the 2024 Launch Canada Competition

PROJECT EXPERIENCE

Defiance Mk. IV Hybrid Rocket | *University of Toronto Aerospace Team*

- Successfully launched at Launch Canada 2024 Competition, won 2nd place in Advanced Category
- Paraffin-Nitrous Oxide propellant, fully student designed and built, record breaking apogee of 30,500 ft for SRAD rocket
- Spearheaded documentation and systems engineering revamp as Project Manager, supported subsystem work

CERTIFICATIONS AND SKILLS

Certifications

- Introduction to Machining Course (Lathe, Mill, Drill Press) | George Brown College (2022)
- Restricted Operator's License-Aviation | Innovation, Science and Economic Development Canada (2019)
- Aviation Medical Certificate Category 3 | Transport Canada (2019)
- Bronze Cross, Standard First Aid and CPR-C | Lifesaving Society, St John Ambulance (2019)

Engineering Analysis Tools

- Java, Python, C, MATLAB, CFD
- Fusion360, Solidworks, GrabCAD, NX
- CATIA System Modeler (SysML)

Project Management Skills

- Slack, Notion, Confluence, ClickUp
- PTC Windchill, TekTie, PLM

Leadership and Communication Skills

- Fully Bilingual in English and French
- Proficient in Mandarin