RICHARD TANG
Fourth Year Manufacturing Engineering Student

Vancouver, BC, V5R 2H1 **|** rtang400@gmail.com **|** 778-838-9586 **|** rktang.github.io **|** linkedin.com/in/richardktang/

TECHNICAL SKILLS

Design & Modelling: Fusion 360, SolidWorks, Siemens NX, Figma, Blender
Manufacturing: MRP Systems, 5S Methodology, CNC Machining, SMT Soldering, Waterjet
Software & Simulation: ANSYS (FEA), MATLAB, C#, C, Unity

EDUCATION

University of British Columbia| Bachelor of Applied Science - Manufacturing Engineering   *Expected 05/2026*

TECHNICAL WORK EXPERIENCE

MDA Space | Brampton, ON **|***Manufacturing Engineering Student*   *05/2024 - 08/2025*

- **Procurement & Material Planning:** Managed procurement operations and inventory using the corporate MRP system. Developed and implemented an internal **Procurement Status Tool** to increase visibility into the procurement cycle and streamline decision-making.
- **Tooling & Layout Design:** Designed and implemented custom workshop fixtures and optimized floor plan layouts for engineering labs, applying 5S principles to **enhance workflow efficiency** and safety standards.
- **Engineering Documentation:** Authored detailed Work Instructions (WIs) and Bills of Materials (BOMs), and executed Engineering Change Requests (ECRs) to **standardize manufacturing processes**.
- **Continuous Improvement:** Led continuous improvement initiatives to reduce non-value-added tasks, resulting in **approximately $450K in annualized savings** and enhanced workflow efficiency.

SAPA Technologies Ltd. |Vancouver, BC**|***Technician*   *06/2021 – 08/2021*

- **Production:** Oversaw the assembly of flexible LED light sheets, exceeding production targets of **1,000+ units weekly.**
- **Quality Assurance:** Executed quality assurance testing using software tools to **minimize product variation** and ensure specification compliance.
- **Inventory & Soldering:** Performed **SMT/THT soldering** on 100+ PCBs and coordinated logistics with shipping providers to maintain 100% stock accuracy

TECHNICAL PROJECTS

UBC Rocket|*Composite Pressure Vessel Member*   *09/2022 – 09/2025*

- **Composite Manufacturing:** Fabricated suborbital **rocket endcaps** using woven carbon fiber and epoxy resin, ensuring high strength-to-weight ratios for flight loads.
- **Equipment Design:** Designed a **custom filament winder** to automate the production of composite fuel tanks.
- **Technical Documentation:** Created **standard operating procedures** for the manufacturing and layup of composite components.

Additive Manufacturing Design (MANU 453)|*Student*   *09/2025 – 12/2025*

- **DfAM Optimization:** Redesigned a mechanical assembly specifically for additive manufacturing, applying **topology optimization** to minimize material usage without compromising mechanical performance.
- **Rapid Prototyping:** Optimized print orientation and support structures to ensure manufacturability and minimize post-processing time.

RC Car Design for Manufacturing (MANU 330) | *Student*   *09/2023 – 05/2024*

- **Mass Production Design:** Designed a remote-controlled car assembly **optimized for an annual production** run of 20,000 units, utilizing injection molding, thermoforming, and CNC machining processes.
- **Simulation & Analysis:** Conducted mold flow simulations and heat dissipation analysis to **validate component geometry** and minimize defects in the aluminum wheel and chassis designs.

S.A.M.I Vertical Farm (Design Competition)|*Project Lead*   *03/2023 – 03/2023*

- **Product Development:** Led a multidisciplinary team to build a "Semi-Autonomous Modular Indoor" farm prototype using Arduino and laser-cut acrylic components.
- **System Integration:** Integrated hardware sensors with a mobile app UI created in Figma to monitor plant health metrics.

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TECHNICAL SKILLS

Design/Modelling	Software	Manufacturing
• Fusion 360/SolidWorks/Siemens NX	• MS SharePoint	•MRP Systems
• Figma	• MATLAB, C	•5S Methodology
• Blender	• ANSYS	•BOM & WIP Management

EDUCATION

University of British Columbia, Vancouver, BC	Expected Graduation: 06/2026
Bachelor of Applied Science - Manufacturing Engineering	

TECHNICAL WORK EXPERIENCE

MDA Space, Brampton, ON   05/2024 - 08/2025
Manufacturing Engineering Student
 • Procurement & Material Planning: Managed procurement operations and inventory using the corporate MRP system. Developed and implemented an internal Procurement Status Tool to increase visibility into the procurement cycle and streamline decision-making.
 • Process Optimization (5S): Collaborated with engineers and technicians to implement 5S + 1 practices in engineering labs and the machine shop, upgrading facilities to improve workspace productivity and safety.
 • Engineering Documentation: Authored detailed Work Instructions (WIs) and Bills of Materials (BOMs), and executed Engineering Change Requests (ECRs) to standardise manufacturing processes.
 • Cost Savings & Efficiency: Led continuous improvement initiatives to reduce non-value-added tasks, resulting in approximately $450K in annualized savings (or project savings) and enhanced workflow efficiency.

SAPA Technologies Ltd., Vancouver, BC   06/2021 – 08/2021
Technician
• Oversaw the assembly of flexible LED light sheets, exceeding production targets of 1,000+ units weekly.
• Executed quality assurance testing using software tools to minimize product variation and ensure specification compliance.
• Performed precision SMT/THT soldering on 100+ PCBs and managed component inventory to support continuous production.

TECHNICAL PROJECTS

UBC Rocket, Vancouver, BC   09/2022 – 09/2025
Composite Pressure Vessel Member
 • Worked with sub team to design and manufacture suborbital rocket endcaps
 • Designed a filament winder
 • Conducted material analysis on woven carbon fiber and epoxy resin
 • Created documentation detailing the manufacturing procedures of the tanks

ADDITIONAL PROJECTS

Everline, Personal Project   07/2023 – 08/2023
https://rktang.itch.io/everline
 • Utilized game asset from other creators and artists
 • Created the game mechanisms, using Unity tutorials and documentation
 • Published the game on itch.io to an audience of 3000+ people

Polynomial Calculus Calculator, University of British Columbia   09/2022 - 11/2022
 • Programmed a calculator in C#, that is able to evaluate expressions
 • Used the Shunting Yard algorithm to convert infix notation to postfix notation
 • Used the Reverse Polish notation to calculate expression in the correct order of operations

Rainwater Harvester Simulation, University of British Columbia   03/2022 – 04/2022
 • Collaborated with my team to balance the initial cost, maintenance needed and GHG emission
of the rainwater system
 • Created a rainwater harvesting simulation using Excel to optimize the access of safe drinking
water
 • Determined the optimal place to station the water tower to minimize energy usage

Cardboard Arduino Claw, UBC   01/2022 –
02/2022
 • Built a semi-autonomous claw made from cardboard
 • Worked with my team to design and develop prototypes to improve the overall product
 • Coded the claw to pick up various sized items (golf ball, sponge, wooden dowel)

Donut Clicker, Personal Project   12/2021 – 05/2022
https://rktang.itch.io/donut-clicker
 • Made multiple prototypes and wireframes in Figma
 • Created the game mechanisms, using Unity tutorials and documentation
 • Published the game on itch.io to an audience of 2000+ people

MANU 330 RC Car Course Project, University of British Columbia   09/2023 – 04/2024
 • Participating in a comprehensive Manufacturing Engineering course, gaining hands-on
experience in manufacturing process design, analysis, and mechanical design of the product.
 • Elevating teamwork and professional communication skills, both in report writing and
presentations.
 • Developing a strong understanding of cost implications and failure analysis in manufacturing.

RICHARD TANG

Third Year Manufacturing Engineering Student

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use linkedin more,
make the name, stand out more ,
add manufacturing engineering student

Technical skills

put education higher up

add vancouver,bc for the UBC

participating for manu 330

Add or remove periods all thorough

reversal

start with strong words in the resume

Add more soft skills, problem solving, critical thinking

Highlight more of the actions,

make more use of the resume space

change the intake components

add vancouver, bc to ubc rocket

keep same header, same formatting

add the re

introduction - what is connection with the interest

body - too many projects without enough details

prove a story in the cover letter

give more information that is not in my resume

make sure to add the soft skills into cover letter

one work experience

add more

VOLUNTEER EXPERIENCE

Youth for Climate Justice Now, Vancouver, BC   01/2020 - 03/2020
Organizer - Car Free Day
• Wrote grants for the Vancity Grants and the Small Neighbourhood Grant
• Reached out to NGO for partnership
• Planned fundraisers

Climate Education Reform BC, Vancouver, BC   09/2020 - 06/2021
Social Media Coordinator, Reform to Transform
• Created social media post to advocate for urgent change in the BC K-12 education system
• Manage social media squad relations with the other coordinators
• Created the CERBC website and Open Letter Sign On

AWARDS

University of Waterloo's Pascal, Cayley, and Fermat Mathematics Contests   2017-2019
BC Achievement Scholarship   06/2021
Leadership – Civis Ergo Rector Scholarship   06/2021
Buddhist Temple Scholarship   06/2021

PROFESSIONAL AFFILIATIONS

Engineers and Geoscientists British Columbia   2022 – Present

Extras

INTERESTS & ACTIVITIES
• Programming
• Podcast
• Music
• Movies
• Video Games

Software
RAVEN Simulation Software