RICHARD TANG

Fourth Year Manufacturing Engineering Student

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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.
- **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 **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.

Everline (Game Development)| *rktang.itch.io/everline* *07/2023 – 08/2023*

- **Software Engineering:** Developed a 2D platformer using **Unity** and **C#**, implementing custom physics mechanics and player movement logic.
- **Deployment:** Published the final build to itch.io, achieving **3,000+ unique player downloads**.

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.