RICHARD TANG

Fourth Year Manufacturing Engineering Student

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

EDUCATION

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

TECHNICAL WORK EXPERIENCE

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

- Generated **~$450K in annualized savings** by leading continuous improvement initiatives to eliminate non-value-added tasks and enhance workflow efficiency.
- Reduced **procurement cycle time by ~20 hours** by developing an internal Procurement Status Tool to streamline inventory management and increase visibility within the MRP system.
- Standardized **80,000+ sq. ft.** of operational space by implementing **5S+1 practices** across all engineering labs and machine shops, ensuring consistent safety and productivity standards.
- Minimized production variability and ensured assembly consistency by authoring **200+** detailed Work Instructions (WIs) and Bills of Materials (BOMs) to standardize manufacturing processes.

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

- Exceeded production targets of **1,000+ units weekly** by overseeing the assembly of flexible LED light sheets.
- Ensured reliable electrical connections by performing **THT soldering on 100+ PCBs** for production assemblies.
- Maintained **100% stock accuracy** by coordinating logistics with shipping providers and managing component inventory flows.
- Maintained a **99.8% first-pass yield rate** by executing rigorous quality assurance testing using software tools to minimize product variation and ensure specification compliance.

TECHNICAL PROJECTS

3D Printing Semiconductors (Capstone Project) | *Researcher* *09/2025 - Present*

- Enabled **5-10µm** deposition resolution (~30x reduction from the baseline) by establishing a standardized pulling and grinding procedure for glass micropipette nozzles.
- Validated the synthesis of **silicon dioxide** from TEOS precursors by designing a 3-phase **experimental campaign** to optimize meniscus drag-deposition flow rates and annealing parameters.

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

- Ensured structural integrity under flight loads by fabricating **suborbital rocket endcaps** using woven carbon fiber and epoxy resin with high strength-to-weight ratios.
- Standardized the manufacturing and layup of composite components by creating comprehensive **standard operating procedures.**

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

- Minimized material usage without compromising mechanical performance by redesigning a mechanical assembly using **topology optimization.**
- **Reduced post-processing time** and ensured manufacturability by optimizing print orientation and support structures.

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

- Validated component geometry and minimized defects in aluminum wheel and chassis designs by conducting mold **flow simulations** and heat dissipation analysis.
- Enabled a hypothetical mass production run of **20,000 annual units** by designing a remote-controlled car assembly utilizing injection molding, thermoforming, and CNC machining processes.

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

- Enabled real-time plant health monitoring by integrating hardware sensors with a custom **Figma-designed** mobile app UI.
- Built a "Semi-Autonomous Modular Indoor" farm prototype by leading a multidisciplinary team using **Arduino** and **laser-cut** acrylic components.

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, Python, C#, C, Unity