

Richard Yang

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Ottawa, Ontario, Canada 📍

KEY QUALIFICATIONS

- Data-driven mechanical engineer with a focus on product test verification and root-cause analysis
- Strong mechanical design capabilities developed through technical internships
- Experience developing and executing test protocols, processing data, and documenting results
- Considerable hands-on involvement with electro-mechanical systems
- Familiar with Python and hardware for automated data collection and analysis
- Clear and concise communication skills working in a dynamic range of team sizes

EXPERIENCE

Manufacturing Engineer

Spartan Bioscience | Ottawa, ON | Nov. 2019 - Present

- Performed verification and validation tests to evaluate component and process changes
- Root-caused production QC failures; resolved quality issues and instigated preventive action
- Developed and executed characterization plans derived from functional design requirements
- Designed calibration jigs to automate data collection and reduce line downtime

Manufacturing Engineering Intern

Formlabs | Boston, MA | Sept. - Dec. 2018

- Root-caused build quality issues; implemented short and long term corrective action
- Designed and validated production calibration routines for the Form 3 SLA printer
- Investigated long-term measurement drift and burn-in tests of sub-system level components
- Developed machinery and tooling for Form 3 production ramp-up

Suspension Damper Design Intern

Multimatic | Toronto, ON | Jan. - Apr. 2018

- Developed test fixtures to examine damper performance limitations in extreme conditions
- Characterized high-pressure sealing capability of various enclosure prototypes
- Designed multiple machined and die-casted parts to optimize assembly packaging

Product Design Intern

XSENSOR Technology | Calgary, AB | May - Aug. 2017

- Performed evaluation study to validate material bonding potential of ultrasonic welding
- Redesigned mechanical stack-up of wiring system to improve durability and reduce part cost
- Prototyped vacuum jigs for layering fabric stack-up to increase sensor accuracy

Process Engineering Intern

Dellcom Aerospace | Toronto, ON | Aug. - Dec. 2016

- Overhauled internal procedures to streamline first-article inspection and shorten lead time
- Optimized production scheduling of sub-assemblies by implementing 'part-leader' approach

Mechanical Engineering Intern

Kimberly Clark | Huntsville, ON | Jan. - Apr. 2016

- Eliminated critical bottlenecks on tissue production line and simplified paper grade change
- Designed tissue rewinder safety guarding to shorten lock-out procedure and reduce downtime

EDUCATION

University of Waterloo | Waterloo, ON | Sept. 2014 - Apr. 2019

Bachelors of Applied Science, Honors **Mechanical Engineering** (With Distinction)

Baja SAE Design Team: Off-Road Vehicle | May 2018 - Apr. 2019

- Designed on-board data acquisition system for performance metrics and fuel monitoring
- Integrated hardware, electrical, and software design in a self-contained sub-system package

SKILL SET

Design

- Solid Modelling
- DFM & DFA
- Drafting (GD&T)
- DFMEA
- Rapid Prototyping

Testing

- Verification & Validation
- Root-Cause Analysis
- Product Calibration
- Data Collection
- IQ OQ PQ

CAD Software

- SolidWorks
- NX
- CATIA V5
- AutoCAD
- ANSYS CFX

Fabrication

- 3D Printing (FDM, SLA)
- Manual Machining
- Soldering
- Ultrasonic Welding
- Laser Cutting
- Water Jetting
- Wood Working

Software

- Python
- MATLAB
- VBA

Hardware

- Raspberry Pi
- Arduino
- Phidget I/O
- Tensile Testing
- Digital Multimeter
- Oscilloscopes
- Microscopic Imaging

Miscellaneous

- Linux CLI, WSL
- MS Office
- Git

Canadian Citizen eligible
for employment in the USA
under TN work permit;
willing to relocate