

Aayush Wadehra

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Education

Stanford University – Master’s in Mechanical Engineering **Sept 2024 - June 2026**

- ▶ Focus in Product Design, Mechatronics, and Robotics

University of Waterloo – Bachelor’s in Mechatronics Engineering **Sept 2016 - June 2021**

- ▶ Graduated with Distinction and on the Dean’s Honor List
- ▶ Researched at the [Social and Intelligent Robotics Research Lab](#), making 3D-printed robot for children with learning disabilities

Skills

CAD: SolidWorks, Fusion360, CATIA, Creo, AutoCAD

Analysis: MATLAB, FEA, DFMEA, 5 Whys, Field Testing, ANSYS

Processes: 3D Printing, CNC, Sheet Metal Fabrication, Welding, Casting, Injection Molding, Laser Cutting, Soldering, Electronics

Manufacturing: Production Line Optimization, Gemba Walks, 5S, 6Sigma, Muda Elimination, Prototype-NPI-MP support

Experience

Mechatronics Engineer (III), *OhmniLabs* – San Jose, CA **Nov 2021 – Aug 2024**

- ▶ Designed parts and assemblies in Fusion360 to address customer feedback and improve performance parameters of robot fleet
- ▶ Minimized production line defects and optimized production output with time studies, jigs, and ideal station setup
- ▶ Coordinated with vendors as a subassembly lead, managing design, manufacturing, shipping, inspection, and assembly line implementation for core sub assemblies
- ▶ Implemented ID changes to modernize look of product, and overhauled existing parts to use more scalable manufacturing techniques, including bending, injection molding, and forming
- ▶ Co-Led NPI for newest product, performing initial prototype builds, validation testing, sourcing, and setup of production lines

Manufacturing Engineer - Intern, *Formlabs* – Somerville, MA **May 2021 – Oct 2022**

- ▶ Collaborated daily with overseas teams in China to streamline production line and address potential issues impacting production
- ▶ Performed RCA using SQL data queries to determine sources of problems and suggested efficient/robust solutions for deployment
- ▶ Implemented changes to parts and assemblies for manufacturability and assembly, and relayed changes to vendors and suppliers

Manufacturing Design Engineer - Intern, *Precision Castparts Corp* – Toronto, ON **Jan 2020 – Apr 2020**

- ▶ Created fixtures and drawings in SolidWorks to support design and manufacturing of large aerospace assemblies
- ▶ Worked with manufacturing team to introduce 5S and lean manufacturing practices, improving time efficiency in the shop by 12%
- ▶ Trained and supervised two junior engineering co-ops, and assisted them in Project Management and SolidWorks design practices

Product Design Engineer - Intern, *Crystal Claire Cosmetics* – Toronto, ON **May 2019 – Aug 2019**

- ▶ Mechanically modified 6-axis robot arm to create attractive and repeatable makeup designs, per customer specifications
- ▶ Collaborated in multidisciplinary rapid prototyping sprint to tackle design challenges as per Marketing and Sales team’s requests

Mechanical Engineer - Intern, *UPS Canada* – Toronto, ON **Sept 2018 – Dec 2018**

- ▶ Managed a \$50,000 budget project for acquisition of new forklifts from project conception to purchase; interacted with vendors, relayed information to signatories, and balanced specifications with budgets for an optimal and informed decision
- ▶ Designed a skid docking platform for the efficient recycling and neat storage of skids and pallets, compliant with OSHA guidelines

Aerospace Engineer - Intern, *Microsat Systems Canada Inc* – Toronto, ON **Jan 2018 – Apr 2018**

- ▶ Designed parts/assemblies for satellites using SolidWorks, creating models for accurate thermal and vibrational analysis
- ▶ Led R&D project for the procurement, analysis, and assembly application of thermal pads onto circuit-board assemblies

Mechatronics Engineer - Intern, *PrecisionHawk* – Toronto, ON **Jan 2018 – Apr 2018**

- ▶ Designed and tested parts in SolidWorks, improving usability/durability/strength of retrofitted DJI quadcopter/hexacopter drones
- ▶ Drafted technical drawings, applying tolerances, dimensions, additional manufacturing instructions, and detailed drawing views

Projects

The CN Tower

[My Slideshow Presentation](#)

- ▶ Designed and fabricated a model of the CN Tower, featuring turned, milled, and casted parts, all made using manual processes
- ▶ Embedded an Arduino into a custom wooden base, and configured the FastLED library to produce LED patterns from the tower

The Starry Night

[My Video Submission](#)

- ▶ Designed, 3D printed, painted, and assembled a model of The Starry Night, featuring gears to make sections of the painting move
- ▶ [Competed and won in annual 3D printing competition](#) against 132 entries from around the world