

JOYCE CHEN

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EDUCATION

Rhode Island School of Design Candidate for MID, Master of Industrial Design <i>Machine Shop Monitor, Electronics Lab Assistant, Communications Team Liason</i>	2025-2027
University of Waterloo BASc Honours Mechatronics Engineering - Dean's Honours Distinction	2020-2025

SKILLS

Manufacturing: Injection Moulding, Woodworking (table saw, band saw, jig saw, router, planer, jointer), 3D Printing (FDM, SLA), Sheet Metal Design, CNC, Laser Cutting
3D: SOLIDWORKS, OnShape, Keyshot, Creo, Blender, Rhino, Grasshopper
2D: Photoshop, Illustrator, Lightroom, InDesign, Figma, Procreate, AutoCAD, C, C++, MATLAB, HTML, CSS

EXPERIENCE

Product Design Mechanical Engineer <i>Verkada - San Mateo, California</i>	Jan - Aug 2024
• Led the complete engineering design and manufacturing of a demo kit device from ideation to mass production <ul style="list-style-type: none">Designed, kicked off, and tested complex sheet metal NCT and plastic injection moulded parts, working with manufacturing vendors in Asia for DFM and toolingWorked closely with Industrial Design, Electrical, Supply Chain, and Leadership for design vision and packagingCreated the SOP and taught assembly line workers to build 650+ units for production	
• Travelled to Taiwan and Vietnam to provide mechanical engineering support on EVT and DVT builds for NPI projects <ul style="list-style-type: none">Supervised workers, implemented jig improvements, performed drop tests, functionality tests, cosmetic checks	
Product Design Mechanical Engineer <i>Viryl Technologies - Toronto, Ontario</i>	May - Aug 2023
• Designed and improved parts for modern automatic vinyl record pressing machines using SOLIDWORKS	
• Conducted failure and root cause analysis for a keyed shaft: performed cyclic loading fatigue life calculations and proposed tolerance, material, and dimension changes to help the shaft reach infinite life	
• Performed compression moulding tests, designed parts for machining, and operated a CNC mill	
Product Design Mechanical Engineer <i>SnapPea Design - Kitchener, Ontario</i>	May - Aug 2022
• Designed injection moulded parts for a wearable device and locking enclosure in Creo, used 3D printers to prototype	
• Co-developed and finalized a patent pending design for a plastic clamping mechanism for fabric curtains	
Mobile Game Visual Designer <i>Salutation Studio - Waterloo, Ontario</i>	Sept - Dec 2021
• Defined the artistic style for a mobile game with conceptual designs, splash art, typography, logos, and icons	

PROJECTS

Salico	2025
• Made an automatic sea asparagus harvester in a team of 5 for a Hawaiian farm, a step towards revolutionizing agriculture while benefitting the environment <ul style="list-style-type: none">Acted as project manager and mechanical designer, completing design and prototyping in 7 months, and coordinating on-site testing in Hawaii to improve harvest speed and yield quality	
• Won “Best Overall Mechatronics Engineering Project” & “Norman Esch Entrepreneurship Award”	
Redbull Flugtag 1st Place National Winner	2022
• Led the complete mechanical and artistic design of the “Snap Pea Flying Machine” in a team of 9 from creative direction and sketches to CAD and mechanical build out	
• Won 1st for flight distance, creativity, and showmanship , then flew a victory lap in a Redbull stunt plane	