

JOYCE CHEN

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EDUCATION

University of Waterloo 2020 - 2025
Candidate for BASc Honours **Mechatronics Engineering**

Rhode Island School of Design 2019
Illustration, Pre-college Program

SKILLS

3D: SOLIDWORKS, OnShape, Keyshot, Creo, Blender, 3D Printing (Bambu, Crealty, Formlabs), CNC, Laser Cutting
2D: Adobe Creative Suite (Photoshop, Illustrator, Lightroom, InDesign), Figma, Procreate, Invision, AutoCAD
Programming: C, C++, MATLAB, HTML, CSS, Sass, Bootstrap, Git

EXPERIENCE

Product Design Mechanical Engineer Jan - Aug 2024
Verkada - San Mateo, California

- Led the [complete engineering design and manufacturing of a Demo Kit device](#) from ideation to mass production
 - Designed, kicked off, and tested complex sheet metal NCT and plastic injection moulded parts, working with manufacturing vendors in Asia for DFM and tooling
 - Worked closely with Industrial Design, Product, Electrical, Supply Chain, and Leadership to perfect the design vision and packaging
 - Created the SOP and taught assembly line workers to build over 650 units for production
- Travelled to Taiwan and Vietnam to provide mechanical engineering support on EVT and DVT builds for NPI projects
 - Supervised workers, discussed fixture/jig improvements, performed drop tests, functionality tests, cosmetic checks, fit checks
 - Unblocked unexpected issues on the line to stay on schedule

Product Design Mechanical Engineer May - Aug 2023
Vinyl Technologies - Toronto, Ontario

- 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
- Designed packaging to ship fragile parts to clients with suppliers, tested samples, and analyzed costs
- Performed compression moulding tests, designed parts for machining, and operated a CNC mill

Product Design Mechanical Engineer May - Aug 2022
SnapPea Design - Kitchener, Ontario

- 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 Sept - Dec 2021
Salutation Studio - Waterloo, Ontario

- Defined the artistic style and created illustrations for a mobile game with conceptual designs, splash art, typography, logos, icons, and advertisements in Figma, Adobe Creative Suite, and Procreate

UX Analyst and Web Designer Jan - Apr 2021
Ontario Institute for Cancer Research - Toronto, Ontario

- Co-lead the design for a new website with user scenarios, site maps, theming guides, and wireframes

PROJECTS

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