

EDUCATION

Massachusetts Institute of Technology (MIT)

Class of 2023

- Candidate for Bachelor of Science in Mechanical Engineering and Creative Writing, GPA: 5.0 Cambridge, MA
- Relevant Coursework: The Product Engineering Process, Design and Manufacturing I & II, Engineering Leadership, Mechanics and Materials, Thermal-Fluids Engineering, How to Make Almost Anything

EXPERIENCE

3 Roll Mill Project

Sept 2021 - Present

Cambridge, MA

- Designed a 3 roll mill with flexure-based roller adjustment mechanism for making paint
- Calculated ideal dimensions for flexures to prevent bending, buckling, and yield
- Turned pieces on a lathe and milled components to precise dimensions for press-fits

Undergraduate Researcher with the Mediated Matter Group, MIT Media Lab

Jan 2020 - Present

Cambridge, MA

- Modeled and fabricated a printhead and end effector to add multi-material capability and to increase print complexity for biopolymer 3D printer
- Designed & printed spirograph mandalas to refine printing parameters and explore material properties
- Conducted biodegradability tests to determine potential for material use in sustainable prototyping
- Discussed research in *Meet the Stars of 3D Printing: Construction Edition* panel hosted by Women in 3D Printing
- Printed biopolymer artwork for the MoMA display *Nature X Humanity* in collaboration with Neri Oxman

MIT Product Engineering Process Class

Sept 2022 - Dec 2022

Cambridge, MA

- Collaborated with a team of 16 students to develop a disc sander that prevents injuries by detecting human touch through capacitive sensing and immediately halting rotation of the disc
- Designed and machined a ribbed disc that was lightweight to halt quickly, but rigid to prevent deformation
- Enhanced teamwork, communication, and morale by serving as a team officer; organized social and working sessions, offered support to teammates, and assisted in organizing weekly meetings

MechE Intern for SLS R&D at Formlabs, Inc.

June 2022 - Aug 2022

Somerville, MA

- Designed and prototyped testbeds and ran experiments to develop a novel SLS printing process
- Collaborated on team to develop process while personally researching a specific technology path
- Developed design concepts as participant of a focus group for printing lightsabers for Disney

MIT Measurement and Instrumentation Class

Feb 2022 - May 2022

Cambridge, MA

- Ran three-point bending tests and spectroscopy analysis on dried watercolor paint to identify ideal formula for handmade paint sold through personal art business Wren In Flight, LLC
- Documented and shared research and statistical analysis in a paper and poster presentation

MIT Design and Manufacturing II Class

Feb 2022 - May 2022

Cambridge, MA

- Designed, CADed, and produced 50 identical injection-molded yoyos on a 5-person team
- Designed for manufacturability when CADing and machining aluminum molds for yoyo pieces
- Tuned parameters for thermoforming and injection molding to yield parts within tolerance

MIT Solar Electric Vehicle Team (SEVT)

Sept 2019 - Apr 2020

Cambridge, MA

- Machined chassis components, thermoformed polycarbonate covers for car lights, and constructed with carbon fiber and epoxy as part of Aerodynamics and Composites subteam
- Promoted SEVT by presenting projects and goals to public at Roslindale Parade and MIT Museum Energy Night
- Prepared car for wind tunnel testing at Ford Driveability Test Facility in Michigan

SKILLS/INTERESTS

Computer: Fusion 360, Solidworks, Rhinoceros/Grasshopper, Eagle, MATLAB, Adobe Illustrator/Photoshop

Fabrication: Lathe, mill, 3D printing, thermoformer, waterjet, band saw, drill press, belt sander, laser cutter, hand tools

Interests: 3D printing, machine design, sustainability, product design, industrial design, writing fantasy novels