# KATANA RAIN FINLASON

Portfolio: katanarain.github.io/portfolio/
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## Skills

- CAD/CAM (SolidWorks and Fusion 360)
- Product Design
- Matlab and C++
- Rapid prototyping
- CNC and Manual Machining
- 3D Printing (FDM & SLA) and Laser Cutting
- Injection Molding and Thermoforming
- Adobe Suite (Illustrator & Animate)

## Education

**MASSACHUSETTS INSTITUTE OF TECHNOLOGY (M.I.T.) Class of 2023**
B.S. in Mechanical Engineering, GPA 4.9/5.0

- ➔ Concentration in Industrial Design with a minor in Energy Studies.
- ➔ Relevant Coursework: Mechanics and Materials, Numerical Computation, Dynamics and Control, Design and Manufacturing I&II, Thermal-Fluids Engineering, Measurement and Instrumentation, Product Engineering, Design for Scale, Applications of Energy in Global Development, Elements of Mechanical Design.

**MASSACHUSETTS INSTITUTE OF TECHNOLOGY (M.I.T.) Class of 2025**
Candidate for M.S. in Mechanical Engineering

- ➔ Working as a member of CADLab while pursuing my studies in graduate school. Focusing on machine design and product development in the MechE Department. Awarded the Martin Fellowship for AY2024.

## Experience

**Department of Mechanical Engineering at MIT** February 2023 - Present
Instructor for 2.009 'Product Engineering Process' & 2.00B 'Toy Product Design'

- ➔ Instructor for two of the most well-known mechanical engineering classes at MIT including the senior capstone class. Mentored teams, prepared lecture material, designed graphics, and actively worked to better engineering education. Coordinated large scale events that cater to thousands of viewers.

**MIT Pappalardo Lab** February 2022 - June 2023
Apprentice/Mentor for 2.007 'Design and Manufacturing I'

- ➔ Worked in the Mechanical Engineering Lab 'Pappalardo'. Assisted students with their robot construction and gave them advice on the best fabrication techniques. Machined my own fully-functioning Stirling engine and camelback straightedge.

**MIT Laboratory for Manufacturing and Productivity (LMP)** September 2022 - June 2023
Lab Assistant

- ➔ Instructed students in the class 'Design and Manufacturing II' while working closely with other course staff to improve the structure of the class. Taught students the art and science of injection molding and thermoforming. Created documentation to help students gain a fundamental understanding of machine tools.

**MIT CADLab UROP** June 2022 - September 2022
Undergraduate Researcher

- ➔ Designed and built the housing and optical fluidics system for a digital holographic microscope that was deployed in the field. Developed the system using 3D printing and laser cutting.

**Mechanical Engineering UROP at MIT Sea Grant** June 2021 - August 2021
Undergraduate Researcher

- ➔ Studied the effects of rising CO2 levels on ocean acidification and the ultimate impact it would have on calcifying organisms such as mollusks in the New England area. Conducted a meta analysis by collecting data, creating a database and performing an analysis to be used in future studies.