

Miana Smith

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Portfolio: <http://www.mit.edu/~miana/index.html>

- education** **Massachusetts Institute of Technology**, Cambridge, MA
Candidate for Bachelor of Science in Mechanical Engineering | Class of 2021
GPA 4.6/5.0
- experience** **MIT Media Lab – Mediated Matter**, Cambridge, MA March 2019 – present
Undergraduate Researcher
- Interdisciplinary research on developing biohybrid fibers to create textiles that synthesize biological outputs.
 - Involves prototyping mechanical devices to facilitate synthetic biology experiments, material characterizations, and substantial wet lab work.
- MIT Digital Design Fabrication Group**, Cambridge, MA June 2018 – August 2018
Undergraduate Researcher
- Designed, built, and tested prototypes of roofing that used material properties such as piezoelectricity to offset residential building energy consumption with the goal of developing smart building façade modules for affordable housing.
 - Extensively used CAD software, 3D printers, and laser cutters for prototyping.
- UCLA Basic Plasma Science Facility**, Los Angeles, CA June 2016 – August 2017
Lab Assistant
- Responsibilities included probe design and construction, data acquisition, and analysis on projects on a variety of plasma wave types.
 - Presented posters at the 2015 and 2016 APS Plasma Physics Division meetings.
- sample projects** **Autonomous target striking boat** February 2019 – May 2019
- Designed and built a small autonomous boat on a team of 3 for a class.
 - The boat was able to visually locate a target and shoot it with toy gun, as well as perform maneuvers and fault protections autonomously.
 - As the electrical system lead, I designed our electronics and power systems, wrote the target striking functionality, and participated in testing all of our systems.
- Miniature wet spinning device for prototyping biohybrid threads** July 2019
- Developed mechanical design in CAD environment and fabricated using laser cutting and 3D printing. Designed, built, and programmed PCB for variable spinning speeds.
 - Iterated electromechanical designs for optimized use.
- coursework** Prior: Design of Electromechanical Robotic Systems, Measurement and Instrumentation, Dynamics and Controls I & II, Thermal-Fluids Engineering I, Mechanics and Materials I, How to Make (Almost) Anything (grad level)
Current: Engineering Systems Designs, Signals and Systems
- skills** Fusion 360 (CAD/CAM/CAE), SolidWorks, EAGLE, Python, MATLAB, Rhino and Grasshopper, AutoCAD, and Photoshop.
Traditional and CNC machining, soldering, and hand tools.
- leadership** **East Campus Bad Ideas Chair** January 2019
- Co-organized Bad Ideas – a three day celebration and implementation of bad ideas at MIT. Involved acquiring funding and managing budget of ~\$7,500, interfacing with Health and Safety to approve events, and coordinating with peers to run ~50 events over the weekend.
- Pinkies** September 2018 – present
- Runs Pinkies, a self-sustaining Sunday night diner in the East Campus dorm at MIT.