**HALEY HIGGINBOTHAM**

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**EDUCATION**

**Massachusetts Institute of Technology 2017 - present**

* MS Candidate in Mechanical Engineering, BS in Bioengineering *Cambridge, MA*
* GPA 5.0/5.0

**Edgewood Jr./Sr. High School Class of 2017**

* Valedictorian, GPA 4.0/4.0, SAT: 2360 *Merritt Island, FL*
* Dual-enrolled at Eastern Florida State College, received AA Degree upon high school graduation

**EXPERIENCE**

**MIT Cima Lab Aug 2021 – present**

*Graduate Researcher Cambridge*, MA

* Designing & testing a microfluidic pumping system for sampling neuropeptides from cranial ISF
* Assisting with cranial implant surgeries in rodent models

**Bioelectronics Group May 2018 – May 2020**

*Undergraduate Researcher Cambridge, MA*

* Built a rat treadmill to investigate the recovery of locomotor function after spinal cord injury
* Aided in the fabrication of custom neural probes
* Trained a neural network on the Cloud to perform motion capture video analysis

**Newman Lab for Biomechanics and Rehabilitation Oct 2017 – Dec 2018**

*Undergraduate Researcher Cambridge, MA*

* Used LabView to interface with the MIT-MANUS robot’s NI cRIO controller and adapt the robot to provide a platform for investigating the influence of auditory feedback for fine motor control

**DLEE Designs, LLC. June 2016 – Sept 2017**

*Part-time Private Contractor* Cocoa, FL

* Executed proof of concept studies and integration of hardware and software
* Developed software, conducted data analysis, and produced 3D models

**LEADERSHIP AND VOLUNTEER WORK**

* Co-founder and VP of The Bike Lab at MIT [2022 – present]
* Resident Advisor and Head of Resident Peer Mentor Program in Baker House [2021 – present]
* Captain of MIT Women’s Lightweight Crew Team [2021 - 22]
* Master of Ceremonies at the 2019 Fung Scholar’s Leadership Conference in Shanghai
* Certified graduate of the Gordan Engineering Leadership Program

**SKILLS**

* **Computers:** CAM/CAD/FEA – Solidworks, Microsoft Office, Python, Arduino, Matlab, LabVIEW
* **Biology:** animal handling (rats and mice), general wet-lab techniques
* **Fabrication:** laser cutter, vinyl cutter, machining, 3d printer, glass-working/fusion, some carpentry, some welding, soldering & solder pasting, gold bonder

**AWARDS/HONORS**

* Named to Pocock Racing Shells Lightweight All-America Team
* NSF Graduate Research Fellowship
* 1st at CRASH-B World Indoor Rowing Championships
* Fung Scholar, Johnson & Johnson Scholar
* National Merit Scholarship Winner
* National AP Scholar Award