**HALEY HIGGINBOTHAM**

4425 Buttonbush Dr. Titusville, FL 32796 • (321) 986-9007 • hhigginb@mit.edu

**EDUCATION**

**Massachusetts Institute of Technology PhD Student**

* MS in Mechanical Engineering 24’, BS in Bioengineering 21’ *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**

**Cima Lab – Koch Institute Aug 2021 – present**

*Graduate Researcher Cambridge*, MA

* Improving hardware and signal processing protocols in NMR sensor for clinical volume sensing
* Developing nanofluidic pump system for minimally invasive monitoring of neural peptide landscape

**Center for Biomedical Engineering Sept 2019 – Sept 2020**

*Undergraduate Researcher Cambridge*, MA

* Investigating difficult endotracheal intubation scenarios
* Designing & prototyping an appendage for laryngoscopes to improve visualization and manipulation

**Bioelectronics Group May 2018 – May 2020**

*Undergraduate Researcher Cambridge, MA*

* Built a treadmill and trained mice in order 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

**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

**ACTIVITIES**

**The Bike Lab July 2022 - present**

* Co-Founder & volunteer mechanic
* Teaching the MIT community how to maintain and repair bikes

**MIT Women’s Lightweight Crew Sept 2017 – May 2022**

* Set the fastest 5k & 2k erg times in the history of the team
* Invited to national team selection camp (Summer 2020)

**Leadership Programs Sept 2019 - present**

* Served as Master of Ceremonies at the 2019 Fung Scholar’s Leadership Conference in Shanghai
* Certification from Gordan Engineering Leadership Program
* Mentored high school students through MIT’s Leadership Training Institute

**SKILLS**

* **Computers:** CAM/CAD– Solidworks, Microsoft Office, Python, Arduino, Matlab, LabVIEW
* **Biology:** animal handling (rats and mice), general wet-lab techniques
* **Fabrication:** laser cutting, vinyl cutting, machining, 3d printing, glass-working/fusion, carpentry, welding, soldering

**AWARDS/HONORS**

* NSF Graduate Research Fellowship
* Fung Scholar
* Johnson & Johnson Scholar
* National Merit Scholarship Winner
* National AP Scholar Award