

Joel Y. Abu

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| Education | Massachusetts Institute of Technology (MIT) Candidate for Bachelor of Science | Cambridge, MA May 2029 |
| | Frederick High School (FHS) Class Rank: 3rd out of 478; GPA: 4.0/4.0 Coursework in Calculus, Physics, and Latin | Frederick, MD May 2025 |
| Work Experience | National Cancer Institute, LCDS <i>Segmentation Scientist Intern</i> | Fort Detrick, MD June 2024 - May 2025 |
| | <ul style="list-style-type: none">Segmented and modeled several multiciliated centriole cells using data collected via FIB-SEM to create 3D modelsCommunicated insights from 3D segmentations at a summer poster dayTrained by and eventually assumed role of lab's postbac who specialized in segmentation with Dragonfly ORS | |
| | Kumon North Frederick <i>Center Assistant</i> | Frederick, MD Mar 2024 - Jun 2024 |
| | <ul style="list-style-type: none">Graded and prepared homework and classwork assignments for over 40 students | |
| Activities & Awards | MIT Motorsports FSAE Team Electrical Team / PCB Design | Cambridge, MA Sept 2025 - Present |
| | FIRST Robotics Competition Team #7886 <i>Team Captain</i> | Frederick, MD Aug 2021 - May 2025 |
| | FHS Model United Nations <i>Senior Member</i> | Frederick, MD Sep 2022 - May 2025 |
| | FHS Computer Science Honor Society <i>Club Secretary</i> | Frederick, MD Sep 2022 - May 2025 |
| | Naval Horizons Essay Highest Honors Award (x2) Received awards from Department of Navy for essays on science topics | Aug 2023 and Aug 2024 |
| Project Experience | Electric Longboard | Jun 2025 - Present |
| | <ul style="list-style-type: none">Building an electric longboard with a self-built lithium-ion battery pack, USB-C PD charging, and a belt-pulley system | |
| | Brushless Motor Robot Actuator | Sep 2024 - Mar 2025 |
| | <ul style="list-style-type: none">Designed with Onshape and assembled a robot actuator using a quadcopter motor and a two-stage belt-pulley gearbox | |
| Skills | Google Suite, Java, Figma, KiCad, Altium, Soldering, Onshape, Dragonfly ORS | |