

**Megan Tseng**  
(732) 353-9073 | mtseng@mit.edu | linkedin.com/in/megantseng/

## Education

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**Massachusetts Institute of Technology**, Cambridge, MA  
*Bachelor of Science in Mechanical Engineering*

Class of 2027  
GPA: 5.0/5.0

- Concentration in Controls, Instrumentation and Robotics

*Bachelor of Science in Computer Science: Computation and Cognition*

Relevant Coursework: Robotics, System Dynamics and Control, Thermal-Fluids Engineering, Mechanics, Circuits, Programming

## Relevant Experience

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**Aerospace Controls Laboratory**, MIT Department of Aeronautics and Astronautics

*Undergraduate Researcher, Autonomous Control*

Sep 2025 – Present

- Enhancing autonomous soaring capabilities to extend flight endurance of a fixed-wing unmanned aerial vehicle (UAV)
- Developing planning and model-predictive control algorithms for multiple flight states on a tiltrotor platform
- Performing system identification and implementation of agile flight for a hybrid vertical take-off and landing UAV

**ASML** | Wilton, CT

*Mechatronics and Control Systems Engineer Intern*

May – Aug 2025

- Created a novel technique for optimizing feedforward controllers on a semiconductor lithography machine reticle stage actuator using frequency response measurements
- Modelled the control system of a short-stroke actuator on a TWINSCAN EXE:5000 reticle stage in MATLAB and achieved precision within 0.1 nanometers of current ASML optimization techniques

**MIT Motorsports**

*Controls Engineer, Software & Aerodynamics Teams*

Sep 2023 – Present

- Modelling vehicle dynamics and developing control algorithms to maximize performance of a four-wheel-drive Formula SAE electric racecar
- Improving fidelity of a physics-based car simulation and quantifying control loop impact on lap times
- Previously: led the design and fabrication of the aerodynamics package's sidepods

**Improbable AI Lab**, MIT Computer Science and Artificial Intelligence Laboratory (CSAIL)

*Undergraduate Researcher, Robotics Hardware*

Sep 2024 – Jan 2025

- Developed miniaturized low-impedance actuators for improving compliance in a dexterous humanoid robotic hand
- Designed a catadioptric camera system to attain a wider field of view and enhance vision-based tactile sensing

## Additional Experience

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**Biomechatronics Group**, MIT Media Lab

*Undergraduate Researcher, Machine Learning*

Dec 2023 – Aug 2024

- Programmed a virtual model to improve proprioceptive feedback for controlling upper extremity prostheses
- Combined machine learning with various biophysical muscle models to convert electromyography (EMG) data of the residual limb to simulated kinematics of the amputated limb

**Pison Technology, Inc.** | Boston, MA

*Research & Development Intern*

May – Aug 2024

- Developed algorithms for processing neurophysiological signals like electrodermal activity via a biosensing wrist device

**MIT Assistive Technology**

*Prosthetics & Braces Lead*

Sep 2023 – May 2024

- Led the team in using CAD and FEA to improve stability of a carbon fiber ankle-foot brace

**MIT Emergency Medical Services**

*EMT-B, Executive Officer*

Aug 2023 – Present

- Responding to medical emergencies and providing patient care; serving as a teaching assistant for new EMT candidates

## Skills

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**Programming:** Python, MATLAB (with Simulink), C++

**CAD:** Solidworks, Siemens NX, Fusion360