

**University Address:**  
410 Memorial Dr, 523C  
Cambridge, MA 02139

# Ethan Chang

Phone: (857) 654-6603  
Email: echang25@mit.edu  
Portfolio: [ethanchang.design](http://ethanchang.design)

## EDUCATION

### Massachusetts Institute of Technology (MIT)

- B.S. in **Mechanical Engineering**, minor in **Design and Computer Science**
- Coursework: Design for Manufacturing, Robotics, Thermal Fluids Engineering, Algorithms Control Theory, Materials and Dynamics, Design Techniques, Deep Learning, Interaction Design

Class of 2025  
GPA: 5.0/5.0

## TECHNICAL SKILLS

- Machine Skills: CNC Mill, Lathe, Waterjet, 3DP, Wood Working, Sheet Metal, LTspice
- CAD/Simulation Software: NX, SolidWorks, Fusion, HSMWorks (CAM), MATLAB, Simulink, FEA
- Design Software: Rhinoceros 3D, Photoshop, InDesign, Illustrator, Lightroom, Grasshopper
- Programming: C (Arduino/Teensy), C++, Python, Machine Learning, Statistics, HTML/CSS/JavaScript

## WORK EXPERIENCES

### MIT Improbable AI lab

*Undergraduate Researcher*

Sept. 2024 – Present

- Training Reinforcement Learning policy on new humanoid hands that allows dexterous movements.
- Constructing multimodal imitation learning pipeline for fast grasping manipulations.

### OpenAI Preparedness Team

*Contractor*

July 2024 – Sept. 2024

- Developed scientific reasoning evaluations for o1 with greater difficulty than existing benchmarks.
- Designed a scalable pipeline for 16 Subject Matter Experts to create evaluations.

### Apple Product Design

*Mac Product Design Intern*

May 2024 – Aug. 2024

- Designed and validated a new interconnecting component for next-generation MacBook with MacPD.
- Coordinated with international vendors to execute trials on part manufacturing, finish, and corrosion tests.
- Facilitated communication between cross-functional teams, including EE, MD, Alloys, and international vendors.

### MIT Culpepper Lab for Mechanisms and Movements

*Undergraduate Researcher*

Sept. 2022 – May 2024

- Conducted three experiments to detect fallacies in micro fixture systems used in mechanical watches.
- Constructed a micron-level device to assess impact withstand stability of proposed fixture designs.

## TEAM/LEADERSHIP EXPERIENCES

### Gordon-MIT Engineering Leadership (GEL) Program

Sept. 2023 - Present

- Engaged in weekly experiential exercises to apply and advance leadership skills in engineering contexts.
- Provided and received constructive feedback to enhance communication and refine leadership styles.

### MIT Engineer Without Borders Member

Jan. 2023 - May 2023

- Initiated outreach for funding and aligned program vision to develop cost-effective medical infrastructures.
- Facilitated connections between a team of twenty and three industry experts.

### MIT East Campus Dormitory Hall Chair

Jan. 2022 – Aug. 2023

- Fostered an inclusive culture for forty members and distributed responsibilities amongst six committees.
- Initiated transparent dialogues and rebuilt community relationships following school-wide controversies.

## SELECTED AWARDS/Achievements

**MIT 2.007 Competition** First Place (MIT Robotics competition, Sophomore capstone class)

June 2023

**MIT 2.12 Competition** First Place (Team Award)

June 2023

**MakeMIT Make-a-thon** First Place (MIT annual product/hardware hackathon)

Feb. 2022

**International Physics Olympiad** Rank 1 in Taiwan qualifier

June 2020

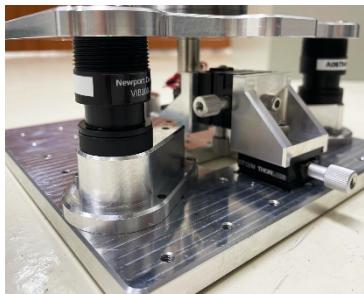
## CLUBS/INTERESTS/OTHER SKILLS

- MIT Imobilare Breakdance Team Executive
- Language: Chinese (Native Proficiency)

- MIT Dance Troupe Member
- Interests: Acoustic Guitar, Oil Painting, Backpacking

## SELECTED PROJECTS

---



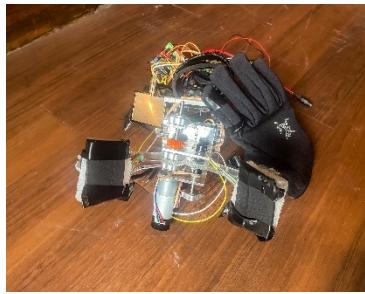
### < Controls/Modeling >

Noise cancelling platform to lower noise by 30x for quantum systems.



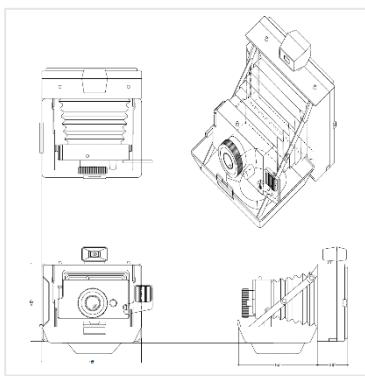
### < Rapid Prototyping >

Competition Robot that won first place in MIT MechE Robotics Competition (2.007)



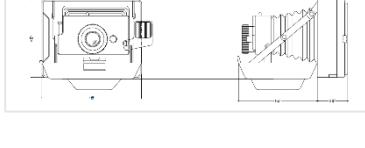
### < Product Design >

Wearable 3DoF claw that amplifies grabbing forces for carpal-tunnel patients.



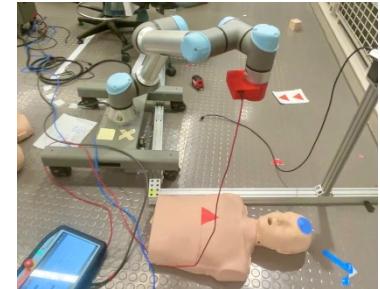
### < Industrial Design >

Investigation on polaroid cameras. Discussing shape, form, and resolution.



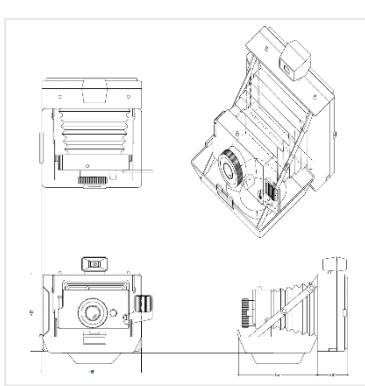
### Robotics/ROS >

UR5 bot programmed to perform CPR operations with computer vision aids.



### AI Interaction Design >

GPT Infused Camera Boombox  
Generate Music from Movements.



### Personal Project >

Spinning hologram that supports 3D display of CAD models from all angles.

