

Matthew Jeung

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EDUCATION

Northwestern University <i>PhD in Computer Science</i>	Evanston, IL 2026 -
University of Chicago <i>BS in Computer Science, Specialization in Machine Learning</i> • Thesis: <i>Towards Programmable Matter: Design and Interaction for Modular Robotic Systems</i>	Chicago, IL 2022 - 2026

HONORS AND AWARDS

Computing Research Association Outstanding Undergraduate Researcher Honorable Mention	2025
UIST 2025 Best Demo Award (Jury's Choice)	2025
University of Chicago - Graduated with Honors in Computer Science	2026
University of Chicago - Cum Laude	2026
Quad Undergraduate Research Scholar Award (\$5000)	2024-25
Jeff Metcalf Fellowship (\$5000)	2023
Humanities UX Scholar	2022

PAPERS

- [1] Shape n' Swarm: Hands-on, Shape-aware Generative Authoring with Swarm UI and LLMs.
M. Jeung, A. Sathya, M. Qian, S. Arellano, L. Jimenez, K. Nakagaki.
In Proc. UIST 2025. Acceptance Rate: 22.2%. Best Demo Award.
- [2] CLAW: Learning Continuous Latent Action World Models via Adversarial Latent Regularization
T. Ayalew, S. Wheeler, **M. Jeung**, X. Zhang, A. Cruz Arce, K. Stocking, M. Maire, M. Walter.
Under Review at ICLR 2027.
- [3] Paper under review at CHI 2027 (Anonymized)
- [4] Paper under review at CHI 2027 (Anonymized)

RESEARCH EXPERIENCE

Northwestern University - Center for Robotics and Biosystems <i>PhD Student (Advised by Prof. Michael Rubenstein)</i>	2026 – Evanston, IL
Toyota Technological Institute at Chicago <i>Visiting Researcher at Robot Intelligence through Perception Lab (Advised by Prof. Matthew Walter)</i> • Leading a modular robotic locomotion project using deep reinforcement learning. • Engineered a novel cube robot with an imbalanced center of mass for full 3D reorientation using a single actuator. • Contributed to a deep learning project on unsupervised action representation learning. • Developed PyTorch code for MuJoCo simulation, GPU training, and benchmark integration.	2025 - 2026 Chicago, IL
University of Chicago - Actuated Experience Lab <i>Undergraduate Researcher (Advised by Prof. Ken Nakagaki)</i> • Introduced a new hand and speech-based approach for generative control of tabletop swarm robots. • Engineered a novel modular haptic device and system, in industry collaboration with Sony.	2023 – 2026 Chicago, IL

COURSEWORK

Theory of Algorithms; Math Foundations for Machine Learning; Engineering Interactive Devices; Mobile Computing; Introduction to Designing Interaction; Engineering Interactive Electronics onto Printed Circuit Boards; Introduction to Machine Learning; Robot Planning, Learning, and Estimation; Generative Deep Models; Foundations of Machine Learning - Generative AI; Swarms and Multi-Robot Systems

TEACHING

Toyota Technological Institute at Chicago

2025

Robot Arm Course Instructor

Chicago, IL

- Mentored five HS students through hands-on robot manipulation course as part of a TTIC outreach program.
- Developed computer vision curriculum and project to automate robot arm playing TicTacToe.
- Gave lectures on python and computer vision.

VOLUNTEERING AND ACTIVITIES

Phoenix Sustainability Initiative

2023 – 2024

Green Data Team

Chicago, IL

- Performed Python data analysis and visualization on Chicago environmental justice and health conditions.

University of Chicago Asian American Interservice

2024 - 2026

Service Coordinator

Chicago, IL

- Organized and participated in regular tutoring, care-packaging nights with local organizations.
- Developed partnerships with local service providers in Chinatown and South Chicago.

UChicago Robotics Team

2024 - 2025

Combat Robotics Team

Chicago, IL

- Won MakeHarvard 2025 Most Sustainable Project with glove integrated with grocery sustainability feedback
- Designed 1-lb combat robot from scratch, developing Fusion 360, electronics, and prototyping skills

TECHNICAL SKILLS

Programming: Python, C, C++, Java, Swift, JavaScript, PyTorch

Electronics and Hardware: Microcontrollers (Arduino and Raspberry Pi), Circuit Board Design (KiCad), CAD Design (Fusion 360), Soldering, Laser Cutting

Design: Figma, Adobe Photoshop, Final Cut Pro