

Michelle Wang

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Education

Massachusetts Institute of Technology, Cambridge, MA

Class of 2027

Major: Electrical Engineering and Computer Science

GPA: 5.0/5.0

Relevant Coursework: Deep Learning, Robotics Science & Systems, Algorithmic Human Robot Interaction, Dynamical Systems Modeling and Controls, Planning Under Uncertainty, Robotic Manipulation

Experience

Undergraduate Research Assistant, Improbable AI group, MIT CSAIL

Jan 2024-present

- Working towards robust robots that interact with the world like humans. Currently interested in humanoid whole-body control, dexterous manipulation, reinforcement learning and HRI
- Standard humanoid motion tracking controllers incentivize stiff control, leading to brittle behaviors. In [1], we use reinforcement learning to learn compliant adaptations from synthetic examples, leading to massive improvements in real-world compliance on the Unitree G1. In [2], we develop a teleoperation system that effectively handles and remains compliant under load. In [3], we enable compliant general motion tracking via residual reference adaption and a pretrained motion tracker.
- Robots suffer from visual occlusion. In [4], we build a mobile bimanual robot, collect teleoperation data, and train ACT policies for active perception, enabling more robust adaptive behaviors.

Atlas AI Research Intern, Boston Dynamics, Waltham MA

June – Aug 2026

- Investigated how to use human demonstrations and data-driven style rewards to inject human priors into dexterous manipulation RL training

Intern, John Deere Intelligent Solutions Group, Fargo, ND

June - Aug 2024

- Built and deployed a multi-agent LLM system that processed 20 years of electronics QA reports using SQL, RAG, in-context learning, and few-shot prompting, delivering a full-stack tool for Deere engineers.

Publications

[1] Gabriel Margolis*, **Michelle Wang***, Nolan Fey, Pulkit Agrawal, “*SoftMimic: Learning Compliant Whole-Body Control from Examples*” (ICRA 2026, [project website](#)).

[2] Venkateshkrishna Venganallore Parsuram, **Michelle Wang**, Gabriel Margolis, Pulkit Agrawal, “PATCH: Payload-Aware Compliant Teleoperation for Humanoids” (to appear at Humanoids 2026)

[3] Venkateshkrishna Venganallore Parsuram, **Michelle Wang**, Pulkit Agrawal, “Compliant GMT: Making General Motion Tracking Compliant via Residual Reference Adaptation” (under review, ICRA 2027, [project website](#))

[4] Bipasha Sen, **Michelle Wang**, Nandini Thakur, Aditya Agarwal, Pulkit Agrawal, “Learning to Look Around: Enhancing Teleoperation and Learning with a Human-like Actuated Neck” spotlight at CoRL 2024 Workshop on Whole-body Control and Bimanual Manipulation ([available on arxiv](#))

Skills

Software: Python, Pytorch, Isaac Lab, Mujoco/mjlab, ROS, OpenCV, Lanchain, Git, Unix, Arduino

Other: 3D modeling/CAD (Fusion 360), 3D printing/rapid prototyping, machining (mill & lathe), Photoshop/Premiere

Additional Projects

Course projects

- Kinesthetic teaching for legged humanoid robots through learned compliant control (Algorithmic HRI, 2026)
- Autonomous racecar integrating perception, localization, planning, and control (RSS, 2025)
- Developing a running foot-contact model with trajectory optimization (Computational Motor Control, 2025)
- Predicting motion tracking failures for safer humanoids using sequence modeling (Deep Learning, 2025)

Personal Projects

- Autonomous Drone and Drone Swarm ([repo](#), 2021-2023): Designed and built an autonomous drone with onboard GPU and computer vision for object tracking, and swarm control using YOLOv4 and custom CNNs; won *2nd Place (National JSHS 2022)* and *4th Place Robotics (ISEF 2023)*.
- IMU-Based Wearable Device for Gait Analysis ([repo](#), 2019-2021): Built an Arduino/IMU wearable and machine learning pipeline to estimate knee angles & classify running form for injury prevention.

Other Activities

Business Lead and Team Member, MIT Assistive Technology Team

Sept 2023-present

- Build & maintain relations with sponsors, mentors, & partners from academia, industry, & nonprofits