

Tae Hoon Yang

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Education

Stanford University, Stanford, CA

Sep 2024 — Expected Jun 2026

M.S. in Computer Science (AI Specialization), GPA: 4.1/4.0

Advisors: Shuran Song, Karen Liu

Northeastern University, Boston, MA

Sep 2018 — May 2024

B.S. in Computer Engineering and Minor in Robotics, Summa Cum Laude

Advisor: Michael Everett

Publications

Locomotion Beyond Feet: Whole-Body Humanoid Locomotion Across Complex Terrain

Tae Hoon Yang, Jiacheng Hu, Haochen Shi, Zhicong Zhang, Daniel Jiang, Weizhuo Wang, Yao He, Zhen Wu, Yifan Hou, Monroe Kennedy, Shuran Song, Karen Liu

In submission

Toward Intelligent Design and Measurement of MEMS Acoustic Wave Resonators

Xingyu Liu, Tianxi Meng, Shuhan Chen, **Tae Hoon Yang**, Jun Zhang, Songbin Gong, Yansong Yang

Manuscript in revision for IEEE Transactions on Microwave Theory and Techniques (TMTT).

Selected Projects

Toddlerbot 2.0: Open-Source ML-Compatible Humanoid Platform

Dec 2024 - Aug 2025

Robotics and Embodied Artificial Intelligence (REAL) Lab and The Movement Lab

Stanford University

- Contributed to the 2.0 release by improving the custom keyframe animation app and adding non-physics motion generating and RL training tools.
- Built an RL training pipeline with custom terrain generation, integrated stereo depth perception using the deep learning model FoundationStereo, and added RGB-D rendering and elevation mapping features in simulation.

Go1 DLIOM-Based Autonomous Navigation

Jan 2024 - Aug 2024

Autonomy & Intelligence Lab

Northeastern University

- Configured Unitree Go1 robot dog with 3D LiDAR sensor fixture and ROS2 environment on robot's Jetson board.
- Integrated state estimation from DLIOM (Direct LiDAR Inertial Odometry and Mapping) with ROS2 Nav2.
- Achieved robot navigation with custom nodes that convert velocities from Nav2 to robot's high-level SDK commands.

Teaching Experience

CS229 Machine Learning

Autumn 2025

Instructors: Moses Charikar, Carlos Guestrin, Andrew Ng

Stanford University

- Assisted with comprehensive course support including homework and exam design, grading, and project guidance.

EECE 2160 Embedded Design: Enabling Robotics

Fall 2022, Spring 2024

Instructors: Emad Aboelea, John Kimani

Northeastern University

- Assisted lab sessions and graded assignments covering FPGA and Digital Logic Design (Quartus Prime), Linux, C++ (pointers, dynamic memory, data structures, and OOP), and robotic arm programming.

EECE 2140 Computing Fundamentals

Spring 2023

Instructor: Roi Yehoshua

Northeastern University

- Assisted and graded assignments covering Python programming syntax, DSA, OOP, NumPy, and unit testing.

Work Experience

Hardware Automation Engineering Intern

Jul 2023 - Dec 2023

iRobot

Bedford, MA

- Developed a vision-based dirtiness grading system to quantitatively evaluate cleaning performance of robot wipers.
- Designed an evaluation system using motion-capture data to assess robotic vacuum navigation performance in terms of cleaning coverage efficiency and path consistency.
- Created power supply C# libraries for automated power supply control by implementing SCPI command interfaces over USB and RS-232 connections.

Skills

Programming: Python, C, C++, C#, MATLAB | **Development Tools:** PyTorch, OpenCV, ROS, ROS2, MuJoCo, Linux, Git, Docker | **Hardware & Electronics:** Stanford Toddlerbot, Unitree Go1, 2D/3D LiDAR, Fisheye/Stereo/RGB-D Camera, IMU, GNSS/RTK, Nvidia Jetson, Raspberry Pi, STM32