Contact

www.linkedin.com/in/tund-theerawit (LinkedIn)

Top Skills

Robot Kinematics & Dynamics
Policy Optimization (PPO)
PCB Design & Debugging

Tund Theerawit

Mechanical Engineering @ University of Wisconsin-Madison '27
Madison, Wisconsin, United States

Summary

I am a Mechanical Engineering student at UW–Madison with a strong focus on robotics, autonomous systems, and intelligent control. My experience bridges mechanical design, reinforcement learning, and embedded systems, giving me a hands-on understanding of how to integrate hardware and AI to create adaptive, real-world robotic platforms.

I am especially interested in the future of autonomous systems —ranging from legged robots to humanoid platforms—and in developing technologies that allow machines to perceive, learn, and act with greater efficiency and reliability. With a background spanning control systems, machine learning, simulation, and prototyping, I am driven to contribute to the next generation of robotics that will transform how humans and machines interact. Feel free to connect with me here or reach out at Theerawit@wisc.edu

Experience

UW-Madison College of Engineering

Robotics Engineer Undergraduate Researcher
May 2025 - Present (9 months)
Madison, Wisconsin, United States

Contributed to the development of the Pupper quadruped robot, focusing on locomotion control and reinforcement learning policy adaptation. Designed and tested adaptive control strategies for stability and velocity tracking, including policy modifications for wheeled locomotion. Collaborated with the Materials Science department to prototype shape memory polymer shins capable of morphing between leg and wheel configurations, allowing the robot to dynamically adapt its mode of locomotion based on terrain.

UW Advanced Materials Industrial Consortium

Undergraduate Research Assistant
September 2023 - Present (2 years 5 months)

Madison, Wisconsin, United States

As a Research and Administrative Assistant at the Advanced Materials Industrial Consortium (AMIC), I supported both research and administrative functions, including summarizing materials science research papers, coordinating logistics for industry-university events, and drafting newsletters. My role involved facilitating collaboration between academic and industrial partners to drive advancements in materials science while providing administrative support to ensure smooth operations.

Recreation & Wellbeing at the University of Wisconsin-Madison

Bakke Climbing Wall Attendant
February 2024 - Present (2 years)
Madison, Wisconsin, United States

University of Wisconsin-Madison

2 months

Summer Undergraduate Research - CATS Lab
July 2024 - August 2024 (2 months)
Madison, Wisconsin, United States

Worked on the development of Ranger, an omnidirectional robot designed for autonomous navigation in both indoor and outdoor environments, capable of handling substantial payloads.
Utilized OpenCV and Python to program the robot's navigation system, enabling it to autonomously follow traffic lines.
Gained proficiency in ROS 2 (Robot Operating System 2) for the operation and control of the Ranger platform.

Undergraduate Research Fellow - Palecek Lab
July 2024 - August 2024 (2 months)
Madison, Wisconsin, United States

Conducted research on mRNA delivery via lipid nanoparticles and genetic manipulation of human pluripotent stem cells (hPSCs) to enhance differentiation into blood-brain barrier cells.
Collaborated with a research team focused on stem cell biology, specifically in the differentiation of brain microvascular endothelial cells and cardiomyocytes from hPSCs for tissue engineering applications.
Worked under the mentorship of James Rolland to develop novel strategies for stem cell differentiation and mRNA delivery.

A.I. Tech.

Project Assistant
July 2023 - August 2023 (2 months)

Programed C++ Automated Guided Carts pathways for autonomous cargo transportation in large factory settings.
Collaborated in a team of 4 to comprehend and proficiently utilize PLC and Ladder code for large robotic arms for industrial applications.
Experimented with vertical stick welding to connect two metal surfaces.

Institute of Field Robotics (FIBO) KMUTT
Technical Report and Research Assistant
June 2022 - August 2022 (3 months)

Collaborated with colleagues to generate a technical report detailing ongoing projects at the Institute of Field Robotics Labs.
Repurposed a DJI Agras drone by dismantling the agricultural components and refitting them with first aid equipment for emergency rescue operations.
Designed a perception map outlining the systems and components required for specialized machine function.

Qbic Engineers and Architects
Web Developer
February 2021 - December 2021 (11 months)

Designed website UI from scratch for a civil engineering firm to display their portfolio.
Articulated detailed and informative descriptions to showcase the diverse range of buildings within the Civil Engineering portfolio.
(https://www.qbic.co.th/)

Education

University of Wisconsin-Madison
Bachelor of Engineering - BE, Mechanical Engineering · (September 2023 - May 2027)

Northwestern University
Summer CTD, Physics · (May 2019 - September 2019)

Bangkok Patana School
High School Diploma · (August 2010 - May 2023)