Taehun Lee, Republic of Korea V.2026

Ⅰ Information

Name: Taehun Lee
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Ⅱ Education

- Taejae University Class of 2029 / Data Science, Natural Science Double Major
- San Francisco State University Semester @ SF State - Undergraduate
- Guri High School, Science-Focused Course Class of 2023

Ⅲ Profile

- Over 10 years of experience participating in and coaching RoboCup Junior / Major and World Robot Olympiad (WRO)
- Recipient of multiple international competition awards and author of research papers published in international journals

Ⅳ Publications

- L. Taehun et al., *RoboUnited 2026 Team Description Paper*, RoboCup Small Size League, 2026
  https://ssl.robocup.org/wp-content/uploads/2026/04/2026_TDP_RoboUninted.pdf
- Lee Taehun, *Sensor-Based Feedback Control in Omnidirectional Systems*, National High School Journal of Science (NHSJS), 2025
  https://nhsjs.com/wp-content/uploads/2025/11/Sensor-Based-Feedback-Control-in-Omnidirectional-Systems.pdf

Ⅴ Experiences

Core Experience

- Referee Committee Member, Soccer Category at the RoboCup Korea Open 2026
- Team Representative of the first university joint team from Korea to compete in the General Division Robot Soccer at the RoboCup World Championship 2026
- 2023–Present: One-on-one robotics instruction in EV3, Arduino, C programming, Python, and Fusion 360 3D modeling

Research Assistant at CARE Lab, San Francisco State University (2026.09 ~ present)

- Assisted with experimental testing and evaluation of an intelligent hand exoskeleton (ExoGlove).
- Developed 3D models and implemented Arduino-based control and sensor integration.
- Supported computer vision and EMG sensor development for human–robot interaction experiments.

Undergraduate Researcher at POSTECH × Taejae University Collaborative Research (2026.08 ~ present)

- Developing AI-based quality inspection and process recommendation systems for carbon prepreg layup manufacturing in aerospace composite production.

- Constructing a multimodal manufacturing dataset by integrating RGB images, tactile/pressure sensing, geometric measurements, and ultrasonic NDT data to capture expert manufacturing knowledge.
- Developing computer vision and machine learning models for bubble/foreign material detection, high-curvature cutting and patching recommendation, and corner adhesion inspection.
- Conducting experimental validation of AI-assisted manufacturing decisions using statistical methods, including agreement analysis with expert operators.
- Collaborating with faculty members and undergraduate researchers on dataset development, experimentation, technical documentation, and preparation of Q1 conference/journal publications.

Undergraduate Researcher at Meta Maker Space, POSTECH (2026.06 ~ 2026.07)
- Research Topic: **A Residual Learning-Based Control Framework for Tensegrity-Based 3D Printing**
- AruCo vision tracking system setup
- Tensegrity movement control via inverse Kinematics

Robotics Instructor at KinderCoding (2026.04 ~ 2026.08)
- Spike Prime, Essential
- World Robot Olympiad Team Coach
- Python programming

Robotics Instructor at LogNCoding (2025.07 ~ 2026.01)
- VEX IQ / VEX V5 / RoboCup Junior
- 1:1 Product Development Project
- USSEO Space, Sports, Biology, Urban Systems Coach

SWEP Instructor at Seoul Foreign School (2025.09 ~ 2026.01)
- VEX IQ
- VEX V5

Robotics Instructor at Brick&Mensa Institute for Gifted (2024.12 ~ 2025.02)
- Instruction in sensor-based feedback control systems for robot soccer
- Guidance on writing research papers
- Recipient of the Best Research Award at the RoboCup Korea Open 2025

Robotics Seminar Lecturer at StarLab Robotics Academy (2024.10)
- “Sensor-Based Feedback Control in Omnidirectional Systems” Seminar

Founder and Leader of Guri High School Robotics Club (2021.03 ~ 2023.12)
- RoboCup Junior Soccer Division
- Participated in two regional leagues and two international leagues
- 3rd Place in Soccer Division
- Multiple Best Research Awards

Ⅵ Competition Experiences

RoboCup Junior
- 4th Place, Rescue Category, RoboCup National Team Selection 2015
  Participant as a member of Team Korea, RoboCup 2015 Adelaide, Australia
- 4th Place, Robot Soccer Category, RoboCup 2018 Melbourne, Australia
- 3rd Place, Rescue Category, RoboCup National Team Selection 2019
  Participant as a member of Team Korea, RoboCup 2019 Japan
- 3rd Place, Robot Soccer Category, RoboCup Asia-Pacific Championship 2019

- Best Research Paper Award, Robot Soccer Category, RoboCup National Team Selection 2022
- Coach, 2nd Place (Robot Soccer MPV Category) and 1st & 3rd Place (Robot Soccer & Rescue MPV Categories), RoboCup Asia-Pacific Championship 2022
- Coach, Best Research Paper Award and 3rd Place (Robot Soccer Category), and Best Research Paper Award (Rescue Category), RoboCup National Team Selection 2023
- Best Research Paper Award, Robot Soccer Category, RoboCup Asia-Pacific Championship 2023
- Coach, Best Research Paper Award (Robot Soccer Category), RoboCup National Team Selection 2025
- Research Paper Instructor, Robot Soccer Category, RoboCup National Team Selection 2026

Creative Coding Challenge

- 1st Place, Robot Soccer Category, Creative Coding Competition 2019 (Awarded by the Daejeon City Council Chairperson)