Changhun Kim

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Research Interests

Trustworthy Machine Learning, Deep Generative Models, Machine Learning Theory

Education

Korea Advanced Institute of Science and Technology (KAIST)   Daejeon, Korea
M.S. in Artificial Intelligence (Advisor: Prof. Eunho Yang)   Feb. 2022 – Feb. 2024
- GPA: 4.25/4.3, 4.00/4.0, 99.5% (Department Salutatorian, Top 0.7% of all Departments)

B.S. in Computer Science and Mathematics (Double Major)   Feb. 2017 – Feb. 2022
- GPA: 3.92/4.3, 3.81/4.0, 96.2% (Magna Cum Laude, Top 9% in the Department)

Employment

UBC Computer Vision Lab   Vancouver, BC, Canada (Remote)
External Collaborator (Advisor: Prof. Evan Shelhamer)   Jul. 2025 – Present
- Researched evergreen test-time adaptation, enabling continual inference-time model adaptation with domain-specific tuning, dynamic ensembles, and adaptive resets to prevent collapse and forgetting.

AITRICS   Seoul, Korea
Machine Learning Researcher (Advisor: Prof. Eunho Yang, Prof. Juho Lee)   Nov. 2023 – Present
- Enhance the robustness and explainability of early prediction models for critical clinical outcomes [M4, W2, C4].

KAIST Machine Learning and Intelligence Lab   Daejeon, Korea
Research Assistant (Advisor: Prof. Eunho Yang)   Mar. 2022 – Feb. 2024
- Explored modality-specific test-time adaptation strategies for diverse tasks including 3D point cloud classification, zero-shot transfer of vision-language models, automatic speech recognition, tabular learning, and time series classification [W1, C2, C1].

Undergraduate Researcher (Advisor: Prof. Eunho Yang)   Jun. 2021 – Feb. 2022
- Investigated a style-matching denoiser for automatic speech recognition.

DeepNatural   Seoul, Korea
Machine Learning Engineer (Advisor: Anson Park)   Sept. 2020 – Feb. 2021
- Constructed machine learning systems for speaker verification/diarization, Duchenne smile classification, smart cushion sitting posture prediction, and medical product recommendation.

KAIST Vehicular Intelligence Lab   Daejeon, Korea
Undergraduate Researcher (Advisor: Prof. Dongsoo Har)   Oct. 2019 – Aug. 2020
- Researched deep reinforcement learning algorithms and developed a block coding system to automatically generate rule-based and deep learning codes for the International Robot Olympiad AI Soccer Challenge.

Netmarble   Seoul, Korea
Data Engineer (Advisor: Sungwoo Lee)   Jun. 2019 – Aug. 2019
- Developed log-based real-time OLAP service for the Seven Knights mobile game.

Publications

M: Manuscript, C: Conference, W: Workshop, *: Equal Contribution

[M4] **Delta-XAI: A Unified Framework for Explaining Prediction Changes in Online Time Series Monitoring**
Changhun Kim*, Yechan Mun*, Hyeongwon Jang, Eunseo Lee, Sangchul Hahn, Eunho Yang
*Under Review at International Conference on Learning Representations (**ICLR**)*, 2026

[M3] **Soft Equivariance Regularization for Invariant Self-Supervised Learning**
Joohyung Lee, **Changhun Kim**, Hyunsu Kim, Kwanhyung Lee, Juho Lee
*Under Review at International Conference on Learning Representations (**ICLR**)*, 2026

[M2] **ReviewScore: Misinformed Peer Review Detection with Large Language Models**
Hyun Ryu, Doohyuk Jang, Hyemin S. Lee, Joonhyun Jeong, Gyeongman Kim, Donghyeon Cho, Gyouk Chu, Minyeong Hwang, Hyeongwon Jang, **Changhun Kim**, Hae Chan Kim, Joowon Kim, Yoonjeon Kim, Kwanhyung Lee, Chanjae Park, Heecheol Yun, Gregor Betz, Eunho Yang
*Under Review at International Conference on Learning Representations (**ICLR**)*, 2026

[M1] **Position Paper: How Should We Responsibly Adopt LLMs in the Peer Review Process?**
Juhwan Choi, JungMin Yun, **Changhun Kim**, YoungBin Kim
Under Review at ACL Rolling Review (ARR), 2025

[C4] **TIMING: Temporality-Aware Integrated Gradients for Time Series Explanation**
Hyeongwon Jang*, **Changhun Kim***, Eunho Yang
International Conference on Machine Learning (ICML), 2025 (**Spotlight, 313/12,107=2.6%**)
ICLR Workshop on XAI4Science: From Understanding Model Behavior to Discovering New Scientific Knowledge, 2025

[C3] **Stable-TTS: Stable Speaker-Adaptive Text-to-Speech Synthesis via Prosody Prompting**
Wooseok Han*, Minki Kang*, **Changhun Kim**, Eunho Yang
IEEE International Conference on Acoustics, Speech, and Signal Processing (ICASSP), 2025

[C2] **CloudFixer: Test-Time Adaptation for 3D Point Clouds via Diffusion-Guided Geometric Transformation**
Hajin Shim*, **Changhun Kim***, Eunho Yang
European Conference on Computer Vision (ECCV), 2024

[C1] **SGEM: Test-Time Adaptation for Automatic Speech Recognition via Sequential-Level Generalized Entropy Minimization**
Changhun Kim, Joonhyung Park, Hajin Shim, Eunho Yang
Conference of the International Speech Communication Association (INTERSPEECH), 2023 (**Oral, 348/2,293=15.2%**)

[W2] **DeltaSHAP: Explaining Prediction Evolutions in Online Patient Monitoring with Shapley Values**
Changhun Kim*, Yechan Mun*, Sangchul Hahn, Eunho Yang
ICML Workshop on Actionable Interpretability, 2025

[W1] **AdapTable: Test-Time Adaptation for Tabular Data via Shift-Aware Uncertainty Calibrator and Label Distribution Handler**
Changhun Kim*, Taewon Kim*, Seungyeon Woo, June Yong Yang, Eunho Yang
NeurIPS Workshop on Table Representation Learning, 2024

Patents

[P2] **Method for Providing Explanation for Patient State Prediction and Electronic Apparatus Therefor**
Changhun Kim, Sangchul Hahn, Kwang Joon Kim
KR Patent App. 10-2025-0009664, 2025

[P1] **Test-Time Adaptation for Automatic Speech Recognition via Sequential-Level Generalized Entropy Minimization**
Eunho Yang, **Changhun Kim**, Joonhyung Park, Hajin Shim
US Patent App. 18/594,442, 2024
KR Patent App. 10-2024-0006413, 2024
KR Patent App. 10-2024-0023266, 2024

Awards and Honors

Top Reviewer (206/10,943=1.9%), ICML 2025	May 2025
Complimentary Registration, ICML 2025	May 2025
Dongwon Full Master's Scholarship, Dongwon Group	Spring 2022 – Fall 2023
Silver Prize, Korean Undergraduate Mathematics Competition	Jan. 2022
National Full Undergraduate Scholarship, Korea Student Aid Foundation (KOSAF)	Spring 2017 – Fall 2021
KAIST Convergence AMP Scholarship, KAIST School of Computing	Mar. 2019

Professional Activities

Teaching Experience

Teaching Assistant, Tabular Learning at Hanwha Ocean Capstone Project	Spring 2023
Teaching Assistant, AI Soccer Challenge at Bokja Girls' High School AI Education Program	Fall 2020

Mentoring Experience

Hyeongwon Jang, Research Assistant at KAIST	Oct. 2024 – Present
Wooseok Han, Researcher at AITRICS	Mar. 2024 – Nov. 2024
Taewon Kim, Undergraduate Researcher at KAIST	Mar. 2023 – Nov. 2023
Sungwoo Cho, Undergraduate Researcher at KAIST	Sept. 2022 – Apr. 2023

Academic Service

Journal Reviewer: TMLR, TNNLS
Conference Reviewer: NeurIPS, ICML, ICLR, AISTATS, AAAI, IJCAI, ACL, EMNLP, ICASSP, LoG