

Changhun Kim

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RESEARCH INTERESTS

Generalizable Deep Learning: Test-Time Adaptation, Meta-Learning, {Zero, Few}-Shot Learning
Generative Models: Diffusion Models, Text-to-{Image, Speech} Generation, Large Language Models
Bayesian Machine Learning: Bayesian Deep Learning, Bayesian Nonparametrics, Neural Processes

EDUCATION

Korea Advanced Institute of Science and Technology (KAIST) Daejeon, South Korea
M.S. in Artificial Intelligence (Advisor: Prof. Eunho Yang) Mar. 2022 – Feb. 2024
▪ GPA: 4.25/4.3, 4.0/4.0, 99.5% (Department Salutatorian, Top 0.7% of all Departments)
B.S. in Computer Science and Mathematics (Double Major) Mar. 2017 – Feb. 2022
▪ GPA: 3.92/4.3, 3.81/4.0, 96.2% (Magna Cum Laude, Top 9% in the Department)

PUBLICATIONS

*: Equal Contribution

CloudFixer: Test-Time Adaptation for 3D Point Clouds via Diffusion-Guided Geometric Transformation

Hajin Shim*, Changhun Kim* and Eunho Yang
Under Review

Stable-TTS: Stable Speaker-Adaptive Text-to-Speech Synthesis via Prosody Prompting under Limited Target Samples

Wooseok Han*, Minki Kang*, Changhun Kim and Eunho Yang
Under Review

SGEM: Test-Time Adaptation for Automatic Speech Recognition via Sequential-Level Generalized Entropy Minimization [paper][code]

Changhun Kim, Joonhyung Park, Hajin Shim and Eunho Yang

Conference of the International Speech Communication Association (INTERSPEECH), 2023

Oral Presentation, 348/2293=15.2%

RESEARCH EXPERIENCE

AITRICS Seoul, South Korea
Machine Learning Researcher (Advisor: Prof. Eunho Yang) Nov. 2023 – Present

- Conduct research on enhancing the accuracy and robustness of predictive models for cardiac arrest and major adverse events in hospitals with electronic health records.

KAIST, Machine Learning and Intelligence Lab Daejeon, South Korea
Master's Student (Advisor: Prof. Eunho Yang) Mar. 2022 – Feb. 2024

- Explore modality-specific test-time adaptation strategies to mitigate data distribution shifts on diverse tasks, such as 3D point cloud classification, zero-shot transfer of vision-language models, automatic speech recognition, and tabular classification.

Research Intern (Advisor: Prof. Eunho Yang) Jun. 2021 – Feb. 2022

- Investigate a style matching denoiser for automatic speech recognition.

KAIST, Vehicular Intelligence Lab Daejeon, South Korea
Research Intern (Advisor: Prof. Dongsoo Har) Oct. 2019 – Aug. 2020

- Research on deep reinforcement learning for AI soccer and design a block coding system to automatically generate both rule-based and deep learning strategies for AI soccer.

WORK EXPERIENCE

Summary.ai Daejeon, South Korea
Developer Intern (Advisor: Prof. Il-Chul Moon) Sep. 2021 – Jan. 2022

- Build back-end systems for scraping and storing financial, stock price, and news data into databases.

DeepNatural Seoul, South Korea
Machine Learning Engineer Intern Sep. 2020 – Feb. 2021

- Construct diverse machine learning systems, including speaker verification and diarization framework, Duchenne smile classifier, and medical product recommender system.

Netmarble Seoul, South Korea
Data Engineer Intern Jun. 2019 – Aug. 2019

- Develop log-based real-time OLAP service for Seven Knights mobile game.

HONORS AND AWARDS	Best MLILAB Member for 2022 – 2023 , KAIST	Jul. 2023
	Dongwon Scholarship (Full M.S.) , KAIST	2022 – 2023
	Silver Prize , Korean Undergraduate Mathematics Competition	Jan. 2022
	Overseas Exchange Scholarship , Mirae Asset	Dec. 2019
	Representative of Student Exchange Ambassador , KAIST	Nov. 2019
	Honor Student , College of Engineering, KAIST	Sep. 2019
	Convergence AMP Scholarship , KAIST	Mar. 2019
	Winner , Science Quiz, KAIST-POSTECH Science War	Sep. 2018
	National Scholarship (Full B.S.) , KAIST	2017 – 2021
PATENTS	Test-Time Adaptation for Automatic Speech Recognition via Sequential-Level Generalized Entropy Minimization	
	Eunho Yang, Changhun Kim , Joonhyung Park and Hajin Shim Patents in United States and South Korea (Pending)	
SKILLS	Programming Skills	
	Programming Languages: Python, C/C++, Java, JavaScript, SQL Libraries/Frameworks: PyTorch, TensorFlow, Node.js, Android Studio	
	Languages Advanced in English and Native in Korean	