

Gyeong-hyeon Kim

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Research Interest

Machine Learning, Deep Learning, Computer Vision, and Video Understanding.

Specific Research Interest:

- Temporal Action Segmentation, Action Anticipation
- Continual Learning, Multi-modal Learning, Efficient Model Training

Education

Chung-Ang University

Ph.D. degree in Computer Science and Engineering

- Supervised by Prof. Eunwoo Kim

Mar. 2023 - Present
Seoul, South Korea

Chung-Ang University

M.S. in Computer Science and Engineering.

- Dissertation title: "Temporal Action Segmentation with Alleviating Local Context Fading"
- GPA: 4.39/4.5
- Supervised by Prof. Eunwoo Kim

Mar. 2021 - Feb. 2023
Seoul, South Korea

Chung-Ang University

B.S. degree in Computer Science and Engineering

- GPA: 3.81/4.5

Mar. 2014 - Feb. 2021
Seoul, South Korea

Publications

(*: Equal contributions)

Similarity-Aware Class Discrimination in Class-Incremental Semantic Segmentation

Gyeong-hyeon Kim*, Nayoung Ko*, and Eunwoo Kim

15th International Conference on Information and Communication Technology Convergence (ICTC), 2024

Oct. 2024

Growing a Brain with Sparsity-Inducing Generation for Continual Learning

Hyundong Jin, Gyeong-hyeon Kim, Chanho Ahn, and Eunwoo Kim

Proceedings of the IEEE/CVF International Conference on Computer Vision (ICCV), 2023

Oct. 2023

GhostNeXt: Rethinking Module Configurations for Efficient Model Design

Kiseong Hong, Gyeong-hyeon Kim, and Eunwoo Kim

Applied Sciences, vol. 13, no. 5, p. 3301

Mar. 2023

Stacked Encoder-Decoder Transformer with Boundary Smoothing for Action Segmentation

Gyeong-hyeon Kim, and Eunwoo Kim

Electronics Letters, vol. 58, no. 25, pp. 972-974

Dec. 2022

Projects

Time-Series Action Prediction and Segmentation

Funded by HD Hyundai Construction Equipment

- This project aims to develop high-performing and parameter-efficient deep learning models to learn and segment time-series actions for various construction equipments.

Mar. 2023 - Jul. 2024

Customized Neural Architecture Search and Proposal

Funded by Samsung SDS

- This project aims to develop customized neural architecture search technology for visual tasks.
- Co-worked with Samsung SDS AI Vision Lab.

Mar. 2021 - Oct. 2021

Pose Estimation for Bin-Picking with a 3D Model

Funded by Doosan Digital Innovation

- This project develops exact 6D pose estimation and instance segmentation algorithms for a bin-picking problem of a robot.

Oct. 2020 - Dec. 2020

Honors and Awards

- First Place, The Third Big Data Idea Competition by Doosan Enerbility, 2023
- Second Place, The Second Big Data Idea Competition by HD Hyundai Site Solutions, 2023
- CAU GRS Scholarship for Ph.D. Course (full scholarship for four semesters), Chung-Ang University, 2023-2025
- CAU GRS Scholarship for M.S Course (full scholarship for four semesters), Chung-Ang University, 2021-2023
- Third Place, Artificial Intelligence Problem Solving Contest, National IT Industry Promotion Agency (NIPA), 2020
- Third Place, Davinci Open Source SW·AI Deep Learning Hackathon, Chung-Ang University, 2020

Patents

Apparatus and Method for Classifying Motion of Objects in Video

May. 2023

Eunwoo Kim, and Gyeong-hyeon Kim

- Korea patent (applied) No. 10-2023-0056528

Leadership and Volunteering

Samsung Junior Software Cup

Sep. 2020 - Nov. 2020

College Student Mentor

- Mentored elementary, middle, and high school students as a college student mentor with an employee mentor.
- Conducted mentoring and feedback for the software implementation of mentee's ideas.

Teaching Experience

Advanced Artificial Intelligence (55697)

Teaching Assistant (Lecturer: Prof. Eunwoo Kim)

Department of AI, CAU
Spring Semester, 2025

Machine Learning (54616)

Teaching Assistant (Lecturer: Prof. Eunwoo Kim)

School of CSE, CAU
Spring Semester, 2024

Capstone Design (56120)

Teaching Assistant (Lecturer: Prof. Eunwoo Kim)

School of CSE, CAU
Spring Semester, 2022

Algorithm (13601)

Teaching Assistant (Lecturer: Prof. Eunwoo Kim)

School of CSE, CAU
Spring Semester, 2021

Skills

Languages:

Python, C/C++, Java

Machine Learning Tools:

PyTorch, TensorFlow

Communications:

Korean, English