Ho-Joong Kim

Ph.D. Candidate

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Education

Korea University *Mar. 2021 - PRESENT*

Ph.D. in Artificial Intelligence

Advisor: Prof. Seong-Whan Lee

Hansung University *Mar. 2015 - Feb. 2021*

B.S. in Industrial Management Engineering and Computer Engineering

Publications

DiGIT: Multi-Dilated Gated Encoder and Central-Adjacent Region Integrated Decoder for Temporal Action Detection Transformer ***CVPR**, 2025*

Ho-Joong Kim, Yearang Lee, Jung-Ho Hong, and Seong-Whan Lee

Comprehensive Information Bottleneck for Unveiling Universal Attribution to Interpret Vision Transformers ***CVPR**, 2025*

Jung-Ho Hong, **Ho-Joong Kim**, Kyu-Sung Jeon, and Seong-Whan Lee *Highlight*

TE-TAD: Towards Full End-to-End Temporal Action Detection via Time-Aligned Coordinate Expression ***CVPR**, 2024*

Ho-Joong Kim, Jung-Ho Hong, Heejo Kong, and Seong-Whan Lee

Text-Infused Attention and Foreground-Aware Modeling for Zero-Shot Temporal Action Detection ***NeurIPS**, 2024*

Yearang Lee, **Ho-Joong Kim**, and Seong-Whan Lee

Unknown-Aware Graph Regularization for Robust Semi-supervised Learning from Uncurated Data ***AAAI**, 2024*

Heejo Kong, Suneung Kim, **Ho-Joong Kim**, and Seong-Whan Lee

MIRe: Enhancing Multimodal Queries Representation via Fusion-Free Modality Interaction for Multimodal Retrieval *ACL Findings, 2025*

Yeong-Joon Ju, **Ho-Joong Kim**, and Seong-Whan Lee

FIQ: Fundamental Question Generation with the Integration of Question Embeddings for Video Question Answering *SMC, 2025*

Juyoung Oh, **Ho-Joong Kim**, and Seong-Whan Lee

Ensuring Spatial Scalability with Temporal-Wise Spatial Attentive Pooling for Temporal Action Detection *Neural Networks, 2024*

Ho-Joong Kim, and Seong-Whan Lee

Description Attribute-Enhanced Spatio-Temporal Zero-shot Action Recognition *ICPRAI, 2024*

Yehna Kim, **Ho-Joong Kim**, and Seong-Whan Lee

Enhancing Discriminative Ability among Similar Classes with Guidance of Text-Image Correlation for Unsupervised Domain Adaptation *IJCNN, 2023*

Yu-Won Lee, Myeong-Seok Oh, **Ho-Joong Kim**, and Seong-Whan Lee *Oral*

Temporal-Invariant Video Representation Learning with Dynamic Temporal Resolutions *AVSS, 2022*

Seong-Yun Jeong, **Ho-Joong Kim**, Myeong-Seok Oh, Gun-Hee Lee, and Seong-Whan Lee *Oral*

SCGN: Novel Generative Model using the Convergence of Latent Space by Training *Electronic Letters, 2020*

Ho-Joong Kim, and Sung-Hoon Jung

SOGN: Novel Generative Model using Self Organizing Map *Electronic Letters, 2019*

Ho-Joong Kim, and Sung-Hoon Jung

Projects

Developing Document Understanding VLLM Agent *Aug. 2025 – Aug. 2026*

Konan Technology

Developing a **document layout analysis** model and **integrating VLLM** to understand analyzed document components. Designing a **lightweight neural network architecture** based on the developed model.

Developing General-Purpose AI Model for Industrial Safety *Sep. 2024 – Aug. 2025*

Mithril

Developed an **open-vocabulary object detection** model capable of detecting unseen objects using linguistic information. Designed a **lightweight neural network architecture** based on the developed model.

Video Event Detection and Recognition via Unsupervised Learning *Mar. 2021 – Nov. 2023*

IITP

Designed an **self-supervised pre-training** model and **zero-shot action recognition** for video understanding using limited computing resources in an unsupervised learning setting.

Lightweight Deep Neural Networks for Mobile Edge Computing *Jun. 2019 – Mar. 2020*

Prizzmable

Developed a model for **tooth object detection** and **plaque segmentation**. Designed **lightweight networks** optimized for deployment on **mobile and embedded devices**.

Awards

Best Paper Award *2019*

The Institute of Electronics and Information Engineers Summer Conference

Best Paper Award *2018*

The Institute of Electronics and Information Engineers Winter Conference

Patent

Method and system for learning self-converging generative networks *Republic of Korea, 2023*

Patent No. KR102580159B1