

JIN-SEOP LEE

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RESEARCH INTEREST

Computer Vision & Multi-modal AI

- Data-efficient Learning: self-/semi-/weakly-supervised learning, domain generalization
- Large Vision-Language Models: Enhancing understanding and reasoning abilities, Video understanding and synthesis, Streaming video understanding
- Efficient AI systems and Physical AI

RESEARCH EXPERIENCE

Visiting Researcher @ NTU

2025.12 - 2026.02

- Mentor: Boyang Albert Li
- Project: Video Temporal Grounding models capable of refusing irrelevant queries

EDUCATION

M.S. & Ph.D. @ Sungkyunkwan University

2021.03 - Present

- Advisor: Jee-Hyong Lee
- Major: Department of Artificial Intelligence

B.S. @ Sungkyunkwan University

2015.03 - 2021.02

- Double Major-1: Department of Mechanical Engineering
- Double Major-2: Department of Computer Engineering

Incheon Science High School

2013.03 - 2015.02

- Major: Mathematics / Chemistry

PUBLICATION

[International Conference / Journal]

- [15] **Jin-Seop Lee***, Sungjoon Lee*, Jee-Hyong Lee, “Learning to Refuse: Refusal-Aware Reinforcement Fine-Tuning for Hard-Irrelevant Queries in Video Temporal Grounding”, Under Review, 2025
- [14] Joohyeon Lee, **Jin-Seop Lee**, Jee-Hyong Lee, “CountCluster: Training-Free Object Quantity Guidance with Cross-Attention Map Clustering for Text-to-Image Generation”, Under Review, 2025
- [13] Doyoung Kim, **Jin-Seop Lee**, Jee-Hyong Lee, “BD-Net: Has depth-wise convolution ever been applied in Binary Neural Networks?”, AAAI 2026
- [12] **Jin-Seop Lee***, Sungjoon Lee*, Jaehan Ahn, Yunseok Choi, Jee-Hyong Lee, “TAG: A Simple Yet Effective Temporal-Aware Approach for Zero-Shot Video Temporal Grounding”, BMVC 2025
- [11] Byung-Joon Lee, **Jin-Seop Lee**, Jee-Hyong Lee, “Stabilizing Open-Set Test-Time Adaptation via Primary-Auxiliary Filtering and Knowledge-Integrated Prediction”, BMVC 2025
- [10] Jihyung Lee*, **Jin-Seop Lee***, Jaehoon Lee, YunSeok Choi, Jee-Hyong Lee, “DCG-SQL: Enhancing In-Context Learning for Text-to-SQL with Deep Contextual Schema Link Graph”, ACL 2025

- [9] **Jin-Seop Lee**, Noo-ri Kim, Jee-Hyong Lee, “DomCLP: Domain-wise Contrastive Learning with Prototype Mixup for Unsupervised Domain Generalization”, AAAI 2025
- [8] Junsu Choi*, **Jin-Seop Lee***, Noo-ri Kim, SuHyun Yoon, Jee-Hyong Lee, “Feature-level and Spatial-level Activation Expansion for Weakly-Supervised Semantic Segmentation”, WACV 2025
- [7] Byung-Joon Lee, **Jin-Seop Lee**, Jee-Hyong Lee, “CAFTTA: Mitigating Unseen Class Forgetting in Test-Time Adaptation with Knowledge Fusion”, SCIS&ISIS 2024
- [6] Gyeong Ryeol Song, Noo-ri Kim, **Jin-Seop Lee**, Jee-Hyong Lee, “IGNORE: Information Gap-based False Negative Loss Rejection for Single Positive Multi-Label Learning”, ECCV 2024
- [5] Noo-ri Kim, **Jin-Seop Lee**, Jee-Hyong Lee, “ExMatch: Semi-Supervised Learning with Scarce Labeled Samples with Additional Exploitation of Unlabeled Samples”, ECCV 2024
- [4] Noo-ri Kim*, **Jin-Seop Lee***, Jee-Hyong Lee, “Learning with Structural Labels in Learning with Noisy Labels”, CVPR 2024
- [3] **Jin-Seop Lee***, Tae-Hyun Kim*, Sang-Hwan Jeon, Sung-Hyun Park, Sang-Hi Kim, Eun-Ho Lee, Jee-Hyong Lee, “Automation of Trimming Die Design Inspection by Zigzag Process Between AI and CAD Domains”, Engineering Applications of Artificial Intelligence, 2024 (TOP 3%, IF 8.0)
- [2] Yusung Kim, **Jin-Seop Lee**, Jee-Hyong Lee, “Automatic defect classification using semi-supervised learning with defect localization”, IEEE Transactions on Semiconductor Manufacturing, 2023
- [1] DongEon Jeong, MinKyu Lee, **Jin-Seop Lee**, Jee-Hyong Lee, “Class Activation Map Pairing for Adversarial Robustness”, ICCV 2020

[Domestic Conference / Journal]

- [9] Hyun Sir Ihm, **Jin-Seop Lee**, Jee-Hyong Lee, “Training-Free Unconditional-Boosted Guidance Scheduling for Long-Tailed Diffusion Models”, CKAIA 2025
- [8] Jung Hoon Kim, **Jin-Seop Lee**, YongHoon Kang, Jee-Hyong Lee, “Optimization of Stable Diffusion Based on Cross Attention Map Analysis”, KIIS Autumn 2024
- [7] Hyun Sir Ihm, **Jin-Seop Lee**, Jee-Hyong Lee, “Fast and Effective Inference Approach in Diffusion-based Image Inpainting without Additional Training”, KIIS Autumn 2024
- [5] Heejae Yang, Jaehoon Lee, **Jin-Seop Lee**, Jee-Hyong Lee, “Missing Modality Reconstruction Method via Similarity Search”, KIIS Spring 2024
- [4] Gyeong-Yeol Song, **Jin-Seop Lee**, Suhyeon Yoon, Jee-Hyong Lee, “Multi Label Classification Loss Re-Weighting Considering the Distribution of Class-Imbalance Datasets”, KIIS Conference 2022
- [3] Hyeon-Min Jang, **Jin-Seop Lee**, Jee-Hyong Lee, “Diffusion-based generative model study for class-imbalance mitigation”, Journal of KIIS, 2022
- [2] Suhyeon Yoon, **Jin-Seop Lee**, Jee-Hyong Lee, “Generating Psuedo-Clean-Label based on Loss Function for Noisy Label”, KIIS Conference 2021
- [1] **Jin-Seop Lee**, Seok-Kyu Kang, Ho-yong Seo, Jee-Hyong Lee, “A Study on Teacher Assisted Attention Transfer to Improve Knowledge Distillation Performance”, KIIS Conference 2020

EXPERIENCE & EDUCATION SERVICES

NVIDIA DLI Ambassador

2021.07 - Present

I have been conducting training workshops and K-Digital Training Program with Fast Campus, Alice, Hancor Academy, Leaders Systems, and NVIDIA.

- Generative AI with Diffusion Model (Instructor)
- Fundamentals of Deep Learning (Instructor)
- Building Conversational AI Applications
- Building Transformer-Based Natural Language Processing Applications
- Fundamentals of Deep Learning for Multi-GPUs
- Getting Started with Deep Learning
- Fundamentals of Accelerated Computing with CUDA C/C++

Korea-Massive Open Online Course (K-MOOC)

2020 - 2023

- Teaching Assistant

Academy Reviewer

2023 - Present

- CVPR, ICCV, ECCV, AAAI, ACL, EMNLP, ...

AWARDS

Ph.D. Fellowship Winner @ National Research Foundation of Korea

2025.09 - Present

- Title: Development Core Technology for Efficient Reasoning of Multimodal Generative AI Models

Korea Olympiad in Chemistry

2012

- 5th Place

Korea Olympiad in Informatics

2009

- 3rd Place

Baduk(Go)

2004

- Amateur 1st degree

SCHOLARSHIP

AI Graduate School Excellence Scholarship

- Half scholarship @ SKKU

2021.03 - Present

Dean's List

- Award for excellent academic performance @ SKKU

2020

Full Scholarship

- Science talent scholar @ SKKU

2015.03 - 2021.02