Dohwan Ko

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https://github.com/ikodoh
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EDUCATION

Korea University   Seoul, Republic of Korea
M.S. & Ph.D. integrated in Computer Science and Engineering   Mar. 2021 - Current
Advisor: Hyunwoo J. Kim

Korea University   Seoul, Republic of Korea
B.S. in Computer Science and Engineering   Mar. 2017 - Feb. 2021

RESEARCH
INTERESTS

- Multi-Modal Agent AI and Reasoning
- Video Large Language Models and Foundation Models
- Efficient Multi-Modal Video Understanding

WORKING
EXPERIENCE

Meta   Menlo Park, CA
- Research Scientist Intern at Meta Reality Labs   Mar. 2025 - Jun. 2025

NEC Labs America   San Jose, CA
- Research Scientist Intern at Media Analytics Team   Jun. 2024 - Aug. 2024

NAVER   Seongnam, Republic of Korea
- Intern at User Feedback Platform   Jul. 2020 - Aug. 2020

PUBLICATIONS

[1] **ST-VLM: Kinematic Instruction Tuning for Spatio-Temporal Reasoning in Dynamic Videos**
Dohwan Ko*, Sihyeon Kim*, Yumin Suh, Vijay Kumar B G, Minseo Yoon, Manmohan Chandraker,
Hyunwoo J. Kim
under review.

[2] **Bidirectional Likelihood Estimation with Multi-Modal Large Language Models for Text-Video
Retrieval**
Dohwan Ko*, Ji Soo Lee*, Minhyuk Choi, Zihang Meng, Hyunwoo J. Kim.
International Conference on Computer Vision *(ICCV)* **Highlight** (top 9.7%), 2025. [paper]

[3] **LLaMo: Large Language Model-based Molecular Graph Assistant**
Jinyoung Park, Minseong Bae, Dohwan Ko, Hyunwoo J. Kim.
Advances in Neural Information Processing Systems *(NeurIPS)*, 2024. [paper]

[4] **Large Language Models are Temporal and Causal Reasoners for Video Question Answering**
Dohwan Ko*, Ji Soo Lee*, Wooyoung Kang, Byungseok Roh, Hyunwoo J. Kim.
Empirical Methods in Natural Language Processing *(EMNLP)*, 2023. [paper]

[5] **Open-Vocabulary Video Question Answering: A New Benchmark for Evaluating the Gener-
alizability of Video Question Answering Models**
Dohwan Ko, Ji Soo Lee, Miso Choi, Jaewon Chu, Jihwan Park, Hyunwoo J. Kim.
International Conference on Computer Vision *(ICCV)*, 2023. [paper]

[6] **MELTR: Meta Loss Transformer for Learning to Fine-tune Video Foundation Models**
Dohwan Ko*, Joonmyung Choi*, Hyeong Kyu Choi, Kyoung-Woon On, Byungseok Roh, Hyunwoo
J. Kim.
Computer Vision and Pattern Recognition *(CVPR)*, 2023. [paper]

[7] **Randomly Shuffled Convolution for Self-Supervised Representation Learning**
Youngjin Oh*, Minkyu Jeon*, Dohwan Ko, Hyunwoo J. Kim.
Information Sciences, 2022. [paper]

[8] **Video-Text Representation Learning via Differentiable Weak Temporal Alignment**
Dohwan Ko, Joonmyung Choi, Juyeon Ko, Shinyeong Noh, Kyoung-Woon On, Eun-Sol Kim, Hyunwoo J. Kim.
Computer Vision and Pattern Recognition *(CVPR)*, 2022. [paper]

[9] **Search-and-Attack: Temporally Sparse Adversarial Perturbations on Videos**
Hwan Heo*, Dohwan Ko*, Jaewon Lee*, Youngjoon Hong, Hyunwoo J. Kim.
IEEE ACCESS, 2021. [paper]

TALKS AND SEMINARS	**Transformer and Visual Question Answering**	Nov. 2023
	Korea University	

TEACHING EXPERIENCE	**Deep Learning** (COSE474)	Seoul, Republic of Korea
	Teaching Assistant at Korea University	Sep. 2022 - Dec. 2022
	Artificial Intelligence (COSE361)	Seoul, Republic of Korea
	Teaching Assistant at Korea University	Mar. 2022 - Jun. 2022

HONORS & AWARDS	**Outstanding Paper Award**, Korea University	2024
	Semester High Honors, Korea University	2020
	Veritas Program Scholarship, Korea University	2017

ACADEMIC SERVICES	Reviewer of **ICLR** (International Conference on Learning Representations)	2026
	Reviewer of **NeurIPS** (Advances in Neural Information Processing Systems)	2025
	Reviewer of **ICCV** (International Conference on Computer Vision)	2025
	Reviewer of **CVPR** (Computer Vision and Pattern Recognition)	2024-2025
	Reviewer of **ECCV** (European Conference on Computer Vision)	2024
	Reviewer of **ACL ARR** (Association for Computational Linguistics Rolling Review)	2024-2025

SKILLS	**Language**
	• Korean (*native*)
	• English (*intermediate*)
	Programming C, Python, PyTorch, git, LaTeX