

Dong-Hee Kim

dongheekim@korea.ac.kr · [dongheekim-ai.github.io](https://github.com/dongheekim-ai) · [Google Scholar](#) · [GitHub](#) · [LinkedIn](#)

Research Interests

Multimodal agents that find and verify visual evidence across space and time.

- **Spatial:** 3D spatial reasoning with visual tools as scaffolding for RL exploration, and spatially grounded robot planning, toward agents that act in the physical world [ICML'26, IROS'26]
- **Temporal:** narrative-level retrieval units for hours-long videos and grounding confusable movie moments, toward agents that verify evidence in long videos [NeurIPS'26 E&D, Preprint'26]
- **Current focus:** embodied perception in dynamic scenes, where an agent must tell its own motion apart from that of objects and ground each answer in what it saw

Education

Korea University, Ph.D. in Artificial Intelligence Advisor: Prof. Donghyun Kim	Mar 2025 – Present
Hanyang University, M.S. in Electronics and Computer Communications Engineering Advisor: Prof. Ki-Seok Chung	Sep 2019 – Aug 2021
Hanyang University, B.S. in Electronic Engineering	Mar 2014 – Aug 2019

Publications

*equal contribution

Preprint 2026	Grounding Confusable Movie Moments Dong-Hee Kim* , Seonwoo Choi*, Changbeen Kim, Juyeon Ko, Youngju Choi, Il Hyeon Mun, Hyunwoo J. Kim, Donghyun Kim
NeurIPS 2026	Beyond Visual Boundaries: Rethinking Scene Segmentation for Movie RAG Dong-Hee Kim , Seonwoo Choi, Changbeen Kim, Jungmyung Wi, Juyeon Ko, Youngju Choi, Il Hyeon Mun, Hyunwoo J. Kim, Donghyun Kim (<i>Evaluations & Datasets Track</i>)
ICML 2026	Diversity Over Frequency: Rethinking Tool Use in Visual Chain-of-Thought Agents Dong-Hee Kim , Reuben Tan, Donghyun Kim (<i>with Microsoft Research</i>)
IROS 2026	Spatially Grounded Long-Horizon Task Planning in the Wild Sehun Jung*, HyunJee Song*, Dong-Hee Kim , Reuben Tan, Jianfeng Gao, Yong Jae Lee, Donghyun Kim (<i>with Microsoft Research and UW-Madison</i>)
ICCV-W 2025	SynRES: Towards Referring Expression Segmentation in the Wild via Synthetic Data Dong-Hee Kim , Hyunjee Song, Donghyun Kim (<i>DataCV Workshop</i>)
ACCV 2024	CNG-SFDA: Clean-and-Noisy Region Guided Online-Offline Source-Free Domain Adaptation Hyeonwoo Cho*, Chanmin Park*, Dong-Hee Kim , Jinyoung Kim, Won Hwa Kim
Preprint 2024	Mask-JEPA: Joint-Embedding Predictive Architecture for Self-Supervised Learning of Mask Classification Architecture Dong-Hee Kim , Sungduk Cho, Hyeonwoo Cho, Chanmin Park, Jinyoung Kim, Won Hwa Kim
CCN 2024	Modelling Brain Atrophy Dynamics Enhances Predicting Cognitive Decline in Alzheimer's Disease Continuum Wooseok Jung, Saehyun Kim, Dong-Hee Kim , Won Hwa Kim
RSNA 2024	Automatic Generation of Radiology Reports for Diagnosing Neurodegenerative Disorders and Comparison with the Board-Certified Neuroradiologist-Written Structured Report Dong-Hee Kim (<i>abstract; also Oral at KCR 2024, Best Abstract Award</i>)
AAIC 2024	Quantitative Analysis of Choroid Plexus Enlargement in Alzheimer's Dementia: A Study of Automated Volumetric Technique Dong-Hee Kim (<i>abstract</i>)
VISAPP 2022	What Matters for Out-of-Distribution Detectors using Pre-trained CNN? Dong-Hee Kim* , Jaeyoon Lee*, Ki-Seok Chung
ISOC 2021	EdgeRL: A Light-Weight C/C++ Framework for On-Device Reinforcement Learning Sang-Soo Park, Dong-Hee Kim , Jun-Gu Kang, Ki-Seok Chung
CoG 2020	A Confidence-Calibrated MOBA Game Winner Predictor Dong-Hee Kim , Changwoo Lee, Ki-Seok Chung

Experience

VUNO Inc., AI Research Engineer

Aug 2021 – Nov 2024

Technical Research Personnel (alternative military service)

- **BRAIN Team** (Oct 2022 – Nov 2024): designed and built a 3D brain-MRI parcellation pipeline in PyTorch; developed brain-MRI report generation with a language model (RSNA 2024, KCR 2024 Oral); contributed to clinical validation of the DeepBrain product; turned iNPH detection research code into product code
- **Digital Oncology Team** (Aug 2021 – Sep 2022): developed lymphocyte instance segmentation from box annotations (TIGER Challenge, 1st place) and gastric cancer lesion segmentation

Honors & Awards

Seoul AI Tech Graduate Student Scholarship (KRW 10,000,000)

2025

SKT Devocean AI Fellowship

2025

Best Abstract Award (Oral), Korean Congress of Radiology (KCR)

2024

TIGER Challenge, 1st Place (Leaderboard 2)

2022

Digital Health Hackathon, AI Track, Top 5

2021

Service

Reviewer: ICML 2026 (Gold Reviewer), NeurIPS 2026, BMVC 2026, AAAI 2026, ICLR 2027

Teaching & Outreach

Teaching Assistant, Microprocessor, Hanyang University

Fall 2019

Research mentor, R&E program for Hansung Science High School students

May 2020 – Nov 2020

Paper-reading group: presented 10+ deep learning papers (YouTube)

Nov 2019 – Dec 2021

Skills

PyTorch, Hugging Face Transformers, verl (RL fine-tuning of MLLMs), vLLM, multi-GPU training, Docker, Git