

Jongseo Lee

Vision and Learning Lab, Kyung Hee University, South Korea

Contact Information

E-mail: jong980812@khu.ac.kr

Personal Website: <https://jong980812.github.io>

Lab Website: <https://vll.khu.ac.kr/>

GitHub: <https://github.com/jong980812>

LinkedIn: www.linkedin.com/in/jongseo-lee-a551ab244

Research Interests

- Video understanding and action recognition
- Video–language multimodal learning (Video-LLMs)
- Video world models
- Explainable and interpretable AI (concept bottleneck models)
- Video class-incremental learning

Education

M.S. in Computer Science , Kyung Hee University, South Korea Advisor: Prof. Jinwoo Choi (Vision and Learning Lab) GPA: 4.43 / 4.5	Sep. 2023 – Aug. 2025
B.S. in Biomedical Engineering , Kyung Hee University, South Korea GPA: 4.23 / 4.5 (overall, including dual degree)	Mar. 2017 – Feb. 2023
B.S. in Electronics Engineering (dual degree), Kyung Hee University, South Korea	Mar. 2020 – Jul. 2023

Research Experience

Post-Master Researcher , Vision and Learning Lab, Kyung Hee University, South Korea Leading research on video-LLM evaluation/diagnosis and explainable video understanding; international collaboration with UC San Diego (TRACE).	Sep. 2025 – Present
Graduate Research Assistant , Vision and Learning Lab, Kyung Hee University, South Korea Researched video class-incremental learning and explainable action recognition; collaborated with Intel Labs (Kyle Min) and ETRI through funded research projects.	Sep. 2023 – Aug. 2025
Undergraduate Research Intern , Vision and Learning Lab, Kyung Hee University, South Korea Conducted research on video action recognition; co-led CAST (NeurIPS 2023) as a co-first author.	Feb. 2022 – Jul. 2023

Publications

(* equal contribution, † corresponding author)

International Conferences & Journals

1. **Disentangled Concepts Speak Louder Than Words: Explainable Video Action Recognition**
Jongseo Lee, Woil Lee, Gyeong-Moon Park[†], Seong Tae Kim[†], Jinwoo Choi[†]
NeurIPS 2025, Spotlight (top 3.5%) [arXiv:2511.03725](#) / [code](#)
2. **ESSENTIAL: Episodic and Semantic Memory Integration for Video Class-Incremental Learning**
Jongseo Lee*, Kyungho Bae*, Kyle Min, Gyeong-Moon Park[†], Jinwoo Choi[†]
ICCV 2025, Highlight Presentation (top 2.9%) [arXiv:2508.10896](#) / [code](#)
3. **CA²ST: Cross-Attention in Audio, Space, and Time for Holistic Video Recognition**
Jongseo Lee*, Joohyun Chang*, Dongho Lee, Jinwoo Choi[†]
IEEE TPAMI, 2025 [arXiv:2503.23447](#)
4. **PCBEAR: Pose Concept Bottleneck for Explainable Action Recognition**
Jongseo Lee, Woil Lee, Gyeong-Moon Park[†], Seong Tae Kim[†], Jinwoo Choi[†]
CVPR Workshop on XAI4CV 2025, Spotlight (16.7%) [arXiv:2504.13140](#)
5. **CAST: Cross-Attention in Space and Time for Video Action Recognition**
Dongho Lee*, Jongseo Lee*, Jinwoo Choi[†]
NeurIPS 2023 [poster](#) / [code](#)
6. **Metaverse Interface with Haptic and Rigid Sense Feedback at a Low Cost**
Jongseo Lee, Su Hyeon Kim, Sun Woong Jang, Jun Yeong Moon, Doug Young Suh[†]
Journal of Appropriate Technology, 8(2), 2022 DOI:10.37675/jat.2022.00171

Preprints (Under Review)

- 7. **Which Way Did It Move? Diagnosing and Overcoming Directional Motion Blindness in Video-LLMs**
Jongseo Lee, Hyuntak Lee, Sunghun Kim, Sooa Kim, Jihoon Chung, Jinwoo Choi[†]
arXiv preprint, 2026 arXiv:2605.22823 / project / code
Presented at the 2nd Workshop on Compositional Learning: Safety, Interpretability, and Agents (CompLearn), ICML 2026 (non-archival poster)
- 8. **TRACE: Trajectory-Aware Concepts for Explainable Video Understanding**
Wooil Lee, Junpyo Hong, **Jongseo Lee**, Tuomas Oikarinen, Tsui-Wei Weng, Jinwoo Choi[†]
Under review, 2026
- 9. **PCEvE: Part Contribution Evaluation Based Model Explanation for Human Figure Drawing Assessment and Beyond**
Jongseo Lee^{*}, Geo Ahn^{*}, Seong Tae Kim[†], Jinwoo Choi[†]
arXiv preprint, 2024 arXiv:2409.18260

Non-Archival Workshop Presentations

- **BiAdA: Holistic Video Recognition via Bidirectional Adapter Fusion**
ICCV 2025 Workshop on Long Video Foundations (LongVidFoundations), non-archival poster

Domestic Conferences (KIISE, 2024)

- Video Concept Bottleneck Model
- Efficient Video Class Incremental Learning via Class Token Re-Learning
- Audio-Video Cross Attention for Effective Video Action Recognition

Research Projects

Motivational Context Analysis of Interaction-Based Reactions in Video	2025
Funded research project with ETRI	
Classification and Explanation Models for ASD Screening Based on Drawing Video Understanding	2024
Funded research project with ETRI — related publication: PCEvE (arXiv:2409.18260)	
Deep Learning Models and Explainable AI for ASD Screening Drawing Data	2023
Funded research project with ETRI	
Rule-Based Group Activity Recognition Video Dataset (AI Hub)	2022
National dataset construction project in collaboration with GAZZILABS — developed and validated AI recognition algorithms	

Honors & Awards

• Spotlight Presentation, NeurIPS 2025 (top 3.5% of accepted papers)	2025
• Highlight Presentation, ICCV 2025 (top 2.9% of accepted papers)	2025
• Spotlight, CVPR Workshop on Explainable AI for Computer Vision	2025

Technical Skills

Programming: Python, C/C++ **Frameworks:** PyTorch
Systems: Large-scale video/multimodal model training and evaluation

Academic Service

Reviewer:

- NeurIPS 2026
- AAAI 2025
- CVPR Workshop on Explainable AI for Computer Vision (XAI4CV) 2026
- 2nd Workshop on Compositional Learning: Safety, Interpretability, and Agents (CompLearn), ICML 2026

References

Prof. Jinwoo Choi — Kyung Hee University, South Korea (M.S. advisor)
Prof. Gyeong-Moon Park — Korea University, South Korea (co-author of DANCE, ESSENTIAL, PCBEAR)
Prof. Seong Tae Kim — Kyung Hee University, South Korea (co-author of DANCE, PCBEAR, PCEvE)
Prof. Tsui-Wei Weng — UC San Diego, USA (co-author of TRACE)
Kyle Min — Oracle, USA (co-author of ESSENTIAL; formerly Intel Labs)
Contact information available upon request.