Jungho **Lee**

PH.D CANDIDATE

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RESEARCH INTERESTS

Human Motion Analysis
- Human Avatar Generation
- Skeleton-based Action Recognition

Neural View Synthesis
- Neural Randiance Fields
- 3D Gaussian Splatting

Mathematical Machine Learning Tool
- Neural Ordinary Differential Equations

EDUCATION

Yonsei University | College of Engineering   *Seoul, South Korea*

INTERATED M.S./PH.D IN ELECTRICAL AND ELECTRONIC ENGINEERING   *Sep. 2021 - Aug. 2026 (Expected)*
- Image and Video Pattern Recognition Lab.
- Advisor: Prof. Sangyoun Lee

Yonsei University | College of Engineering   *Seoul, South Korea*

B.S. IN ELECTRICAL & ELECTRONIC ENGINEERING   *Mar. 2015 - Aug. 2021*
- 2-Year Military Service (2017-2019)

RESEARCH EXPERIENCE

NAVER Cloud   *Seongnam, South Korea*

RESEARCH INTERN   *Aug. 2024 - Feb. 2025*
- 3D Scene Representation from Defocused Images
- 3D Human Avater Generation
- Mentor: Ho-Deok Jang

PUBLICATIONS

First-Author Papers

CoMoGaussian: Continuous Motion-Aware Gaussian Splatting from Motion-Blurred Images   *2025*

JUNGHO LEE, DONGHYEONG KIM, DOGYOON LEE, SUHWAN CHO, MINHYEOK LEE, WONJOON LEE, TAEOH KIM, DONGYOON WEE, SANGYOUN LEE

Submitted to *Proceedings of the IEEE/CVF International Conference on Computer Vision (**ICCV**)*

CoCoGaussian: Leveraging Circle of Confusion for Gaussian Splatting from Defocused Images   *2025*

JUNGHO LEE, SUHWAN CHO, TAEOH KIM, HO-DEOK JANG, MINHYEOK LEE, GEONHO CHA, DONGYOON WEE, DOGYOON LEE, SANGYOUN LEE

*Proceedings of the IEEE/CVF Computer Vision and Pattern Recognition (**CVPR**)*

SMURF: Continuous Dynamics for Motion-Deblurring Radiance Fields   *2025*

JUNGHO LEE, DOGYOON LEE, MINHYEOK LEE, DONGHYEONG KIM, SANGYOUN LEE

*Proceedings of the IEEE/CVF Computer Vision and Pattern Recognition Workshop (**CVPRW**)*

Hierarchically Decomposed Graph Convolutional Networks for Skeleton-Based Action Recognition   *2023*

JUNGHO LEE, MINHYEOK LEE, DOGYOON LEE, SANGYOUN LEE

*Proceedings of the IEEE/CVF International Conference on Computer Vision (**ICCV**)*

Leveraging Spatio-Temporal Dependency for Skeleton-Based Action Recognition   *2023*

JUNGHO LEE, MINHYEOK LEE, SUHWAN CHO, SUNGMIN WOO, SUNGJUN JANG, SANGYOUN LEE

*Proceedings of the IEEE/CVF International Conference on Computer Vision (**ICCV**)*

Conference Proceedings

CoCoGaussian: Leveraging Circle of Confusion for Gaussian Splatting from Defocused Images *2025*
JUNGHO LEE, SUHWAN CHO, TAEOH KIM, HO-DEOK JANG, MINHYEOK LEE, GEONHO CHA, DONGYOON WEE, DOGYOON LEE, SANGYOUN LEE
*Proceedings of the IEEE/CVF Computer Vision and Pattern Recognition (**CVPR**)*

Effective SAM Combination for Open-Vocabulary Semantic Segmentation *2025*
MINHYEOK LEE, SUHWAN CHO, JUNGHO LEE, SUNGHUN YANG, HEESEUNG CHOI, IG-JAE KIM, SANGYOUN LEE
*Proceedings of the IEEE/CVF Computer Vision and Pattern Recognition (**CVPR**) - Oral Presentation*

SMURF: Continuous Dynamics for Motion-Deblurring Radiance Fields *2025*
JUNGHO LEE, DOGYOON LEE, MINHYEOK LEE, DONGHYEONG KIM, SANGYOUN LEE
*Proceedings of the IEEE/CVF Computer Vision and Pattern Recognition Workshop (**CVPRW**)*

Video Diffusion Models are Strong Video Inpainter *2025*
MINHYEOK LEE, SUHWAN CHO, CHAJIN SHIN, JUNGHO LEE, SUNGHUN YANG, SANGYOUN LEE
*The Association for the Advancement of Artificial Intelligence (**AAAI**)*

Guided Slot Attention for Unsupervised Video Object Segmentation *2024*
MINHYEOK LEE, DOGYOON LEE, SUHWAN CHO, CHAEWON PARK, JUNGHO LEE, SANGYOUN LEE
*Proceedings of the IEEE/CVF Computer Vision and Pattern Recognition (**CVPR**)*

Hierarchically Decomposed Graph Convolutional Networks for Skeleton-Based Action Recognition *2023*
JUNGHO LEE, MINHYEOK LEE, DOGYOON LEE, SANGYOUN LEE
*Proceedings of the IEEE/CVF International Conference on Computer Vision (**ICCV**)*

Leveraging Spatio-Temporal Dependency for Skeleton-Based Action Recognition *2023*
JUNGHO LEE, MINHYEOK LEE, SUHWAN CHO, SUNGMIN WOO, SUNGJUN JANG, SANGYOUN LEE
*Proceedings of the IEEE/CVF International Conference on Computer Vision (**ICCV**)*

Detection-Identification Balancing Margin Loss for One-Stage Multi-Object Tracking *2022*
HEANSUNG LEE, SUHWAN CHO, SUNGJUN JANG, JUNGHO LEE, SANGYOUN LEE
International Conference on Image Processing (ICIP)

Journals

Sparse-DeRF: Deblurred Neural Radiance Fields from Sparse View *2025*
DOGYOON LEE, DONGHYEONG KIM, JUNGHO LEE, MINHYEOK LEE, SEUNGHOON LEE, SANGYOUN LEE
*IEEE Transactions on Pattern Analysis and Machine Intelligence (**TPAMI**)*

Treating Motion as Option with Output Selection for Unsupervised Video Object Segmentation *2025*
SUHWAN CHO, MINHYEOK LEE, JUNGHO LEE, MYEONGAH CHO, SANGYOUN LEE
IEEE Transactions on Circuits and Systems for Video Technology (TCSVT)

Multi-Scale Structural Graph Convolutional Network for Skeleton-Based Action Recognition *2024*
SUNGJUN JANG, HEANSUNG LEE, WOOJIN KIM, JUNGHO LEE, SUNGMIN WOO, SANGYOUN LEE
IEEE Transactions on Circuits and Systems for Video Technology (TCSVT)

Preprinted Papers
- **[Submitted to ICCV] J. Lee**, D. Kim, D. Lee, S. Cho, M. Lee, W. Lee, T. Kim, D. Wee, S. Lee. CoMoGaussian: Continuous Motion-Aware Gaussian Splatting from Motion-Blurred Images. *arXiv preprint arXiv:2503.05332*, 2025.
- **[Submitted to ICCV]** W. Lee, S. Woo, **J. Lee**, D. Kim, S. Lee. Spurf-GS: View-Consistent Geometry Adaptation for Sparse-View Surface Reconstruction via Gaussian Splatting.
- **[Submitted to ICCV]** S. Cho, S. Lee, M. Lee, **J. Lee**, S. Lee. Find First, Track Next: Decoupling Identification and Propagation in Referring Video Object Segmentation. *arXiv preprint arXiv:2503.03492*, 2025.

PATENTS

Domestic Patent
- [**P3**] Palmprint Recognition Method. KR-Application No.10-2023-0156996, Nov., 2023.
- [**P2**] Skeleton Graph-based Action Recognition Device and Method. KR-Application No.10-2023-0123693, Sep., 2023.
- [**P1**] Video Anomaly Detection Apparatus and Method using Relational Embedding. KR-Application No.10-2022-0156968, Nov., 2022.

PROJECTS

Research on Robust Neural Rendering-Based Large-Scale 3D Ultra-Precision Virtual Space Generation and Spatial Registration for Low-Quality Noisy Data

National Research Foundation of Korea

DEEP LEARNING RESEARCHER

May. 2024 - Apr. 2027

- Development of large scene reconstruction by 3D Gaussian Splatting.

Collaborative Perception and Intelligence Framework for Hyper-connected Interaction among Human and Intelligent Things

Korea Electronics Technology Institute

DEEP LEARNING RESEARCHER

Apr. 2024 - Dec. 2025

- Development of efficient skeleton-based action recognition model.

Development of Anti-spoofing Model for Face Recognition Based on RGB Camera

Samsung Electronics

DEEP LEARNING RESEARCHER

Aug. 2023 - Jul. 2024

- Development of face anti-spoofing model robust to various spoofing attack.

Development of Mobile Palmprint Recognition Algorithm

Samsung Electronics

DEEP LEARNING RESEARCHER

Aug. 2022 - Jul. 2023

- Development of one-stage real-time mobile network, which includes keypoint detection and palmprint recognition.
- Development of real-time Android demo application for palmprint recognition.

Deep Learning-Based Initial Identification and Tracking System for Missing Persons in Heterogeneous CCTV Images

National Research Foundation of Korea

DEEP LEARNING RESEARCHER

Oct. 2018 - Dec. 2022

- Development of real-time multi-object tracking algorithm robust to occluded person.

Development of AI Multi-Object Tracking and Behavior Analysis Technology

Hanwha Techwin

DEEP LEARNING RESEARCHER

Oct. 2020 - Oct. 2021

- Development of robust feature extractor for the object detection network.

Professional Services

Journal Reviewer

- International Journal of Computer Vision (**IJCV**) — *2024*
- IEEE Transactions on Multimedia (**TMM**) — *2024*
- IEEE Transactions on Pattern Analysis and Machine Intelligence (**TPAMI**) — *2023*
- IEEE Transactions on Neural Networks and Learning Systems (**TNNLS**) — *2023*
- IEEE Transactions on Circuits and Systems for Video Technology (**TCSVT**) — *2023*

Conference Reviewer

- IEEE/CVF Computer Vision and Pattern Recognition (**CVPR**) - **Outstanding Reviewer (top 5%)** — *2025*
- Conference on Neural Information Processing Systems (**NeurIPS**) — *2024*
- European Conference on Computer Vision (**ECCV**) — *2024*
- IEEE/CVF Winter Conference on Applications of Computer Vision (**WACV**) — *2024*

TEACHING EXPERIENCES

Understanding and Using AI

Yonsei University

TEACHING ASSISTANT

Spring 2022 - Spring 2025

Deep Learning Lab.

Yonsei University

TEACHING ASSISTANT

Spring 2023

Digital Locig Circuit

Yonsei University

TEACHING ASSISTANT

Fall 2021

SKILLS

Research and Development Stacks

Main Languages	**Python**, **C/C++**, **MATLAB**, Kotlin
Machine Learning	**PyTorch**, **TensorFlow**, Keras
Computer Vision	OpenCV

REFERENCES

Sangyoun Lee   Professor, Yonsei University   syleee@yonsei.ac.kr