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**)*

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**)*

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**)*

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 (**T-PAMI**)*

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 (T-CSVT)

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 (T-CSVT)

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 (**T-MM**) *2024*
- IEEE Transactions on Pattern Analysis and Machine Intelligence (**T-PAMI**) *2023*
- IEEE Transactions on Neural Networks and Learning Systems (**T-NNLS**) *2023*
- IEEE Transactions on Circuits and Systems for Video Technology (**T-CSVT**) *2023*

Conference Reviewer
- IEEE/CVF Computer Vision and Pattern Recognition (**CVPR**) *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