Gyeongjin Kang

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Research Interest

I have broad interests in Computer Vision and Graphics, particularly in 3D/4D representation and reconstruction learning that enables robust scene understanding across diverse and complex real-world environments. In particular, I am interested in:

- **Efficient Architectural Design for Feed-Forward Geometric Models**
  - Efficient updatable (streaming) architectural design for multi-view transformer.
  - Robust fusion of heterogeneous sensor modalities (RGB, depth, camera poses) under noisy conditions.
- **Self-Supervised Geometry Learning**
  - Scalable self-supervised pre-training for 3D/4D foundation models leveraging large-scale video data.
- **World Modeling with Geometric Representations**
  - Geometrically consistent long-horizon world modeling for dynamic scene prediction.

Education

Sungkyunkwan University *Mar 2024 – Feb 2026*
MS in Electrical and Computer Engineering
- GPA: 4.42/4.5

Sungkyunkwan University *Mar 2017 – Feb 2024*
BEng in Electronic and Electrical Engineering
- GPA: 4.17/4.5 (Major GPA: 4.32/4.5)

Experience

Research Experience (Advisor: Eunbyung Park) *South Korea*
V-Lab, Yonsei University *Sep 2023 – Feb 2026*
- Self-supervised 3D representation learning
- Efficient feed-forward 3D reconstruction learning

Engineer Intern *South Korea*
Samsumg Electronics *Mar 2022 – June 2022*
- Automated evaluation and analysis systems for semiconductor production.
- Data analysis on semiconductor manufacturing metrics.

Military Service *Mar 2018 – Nov 2019*
- Republic of Korea Army.

Publications

∗ Equal contribution † Corresponding author

Multi-view Pyramid Transformer: Look Coarser to See Broader Link *CVPR, 2026*
Gyeongjin Kang∗, Seungkwon Yang∗, Seungtae Nam, Younggeun Lee, Jungwoo Kim, Eunbyung Park†

Uni3R: Unified 3D Reconstruction and Semantic Understanding via Generalizable Gaussian Splatting from Unposed Multi-View Images Link *CVPR, 2026*
Xiangyu Sun∗, Haoyi Jiang∗, Liu Liu, Seungtae Nam, ***Gyeongjin Kang***, Xinjie Wang, Wei Sui, Zhizhong Su, Wenyu Liu, Xinggang Wang, Eunbyung Park†

iLRM: An Iterative Large 3D Reconstruction Model Link *CVPR, 2026*

Gyeongjin Kang, Seungtae Nam, Xiangyu Sun, Sameh Khamis, Abdelrahman Mohamed, Eunbyung Park†

Generative Densification: Learning to Densify Gaussians for High-Fidelity Generalizable 3D Reconstruction Link *CVPR (Highlight), 2025*

Seungtae Nam*, Xiangyu Sun*, ***Gyeongjin Kang***, Younggeun Lee*, Seungjun Oh, Eunbyung Park†

SelfSplat: Pose-Free and 3D Prior-Free Generalizable 3D Gaussian Splatting Link *CVPR, 2025*

Gyeongjin Kang*, Jisang Yoo*, Jihyeon Park, Seungtae Nam, Hyeonsoo Im, Sangheon Shin, Sangpil Kim, Eunbyung Park†

CodecNeRF: Toward Fast Encoding and Decoding, Compact, and High-quality Novel-view Synthesis Link *AAAI, 2025*

Gyeongjin Kang*, Younggeun Lee*, Seungjun Oh, Eunbyung Park†

Preprints

* Equal contribution † Corresponding author

2XPlat: Two Experts Are Better Than One Generalist Link *arXiv, 2026*

Hwasik Jeong *, Seungryong Lee*, ***Gyeongjin Kang***, Seungkwon Yang, Xiangyu Sun, Seungtae Nam, Eunbyung Park†

OpenMonoGS-SLAM: Monocular Gaussian Splatting SLAM with Open-set Semantics Link *arXiv, 2025*

Jisang Yoo, ***Gyeongjin Kang***, Hyunkyu Ko, Eunbyung Park†

Gather-Scatter Mamba: Accelerating Propagation with Efficient State Space Model Link *arXiv, 2025*

Hyunkyu Ko, Youbin Kim, Jihyeon Park, Dongheok Park, ***Gyeongjin Kang***, Wonjin Cho, Hyung Yi, Eunbyung Park†

Honers and Awards

AI Champion Competition
- High-performance, high-efficiency large-scale 3D reconstruction model
- 9th place, Ministry of Science and ICT (South Korea)

Academic Excellence Scholarship
- Fall 2021, Spring 2023, Spring 2024, Fall 2024, Spring 2025, Fall 2025

Teaching experience

Teaching Assistant
- Image Processing (Fall 2025)
- Foundations of Machine Learning (Spring 2025)
- Introduction to Machine Learning (Spring 2024)
- Autonomous driving capstone design (Fall 2023, Fall 2024)
  - Video Link

Research Mentoring
- Undergraduate research program (Fall 2024)
  - Animatable human avatar

Misc

Programming: PyTorch, Python, C++, CUDA, Linux

Languages: Korean, English