

Jongmin Park

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Education

- 09.2022 – 08.2026  **Ph.D.** in School of Electrical Engineering, **KAIST**
Advisor: Prof. Munchurl Kim (VICLAB)
Dissertation: *A study on motion-adaptive spline-based 3D Gaussian splatting for high-quality and efficient dynamic scene reconstruction from monocular videos.*
- 09.2020 – 08.2022  **M.S.** in School of Electrical Engineering, **KAIST**
Advisor: Prof. Munchurl Kim (VICLAB)
Thesis: *A study on transformer-based image compression framework of spatial scalability for arbitrary scaling applications.*
- 03.2015 – 08.2020  **B.S.** in School of Electrical Engineering, **KAIST**

Work Experience

- 09.2026 – Present  **Postdoctoral Researcher, Seoul National University**
PI Lab (Advisor: Prof. Youngjae Yu)
Research on world action models and VLA models for embodied agents

Research Interests

3D Vision: Dynamic 3D Scene Reconstruction; Generalizable 3D Scene Reconstruction

Embodied AI: Vision-Language-Action (VLA) Models; World Action Models

Publications

* : Equal contribution

Preprint

- 1 **J. Park***, J. Yun*, M.-Q. V. Bui, and M. Kim, “WebSpline: Structure-Informed Splines for Real-Time 3D Gaussians from Monocular Videos,” *arXiv preprint arXiv:2606.02096*, Jun. 2026, Under review.

International Journals & Conferences

- 1 **J. Park***, M.-Q. V. Bui*, J. L. G. Bello, J. Moon, J. Oh, and M. Kim, “EcoSplat: Efficiency-controllable Feed-forward 3D Gaussian Splatting from Multi-view Images,” in *Proceedings of the IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR) (Highlight)*, Jun. 2026.
- 2 M.-Q. V. Bui*, **J. Park***, J. L. G. Bello, J. Moon, J. Oh, and M. Kim, “MoBGS: Motion Deblurring Dynamic 3D Gaussian Splatting for Blurry Monocular Video,” in *Proceedings of the AAAI Conference on Artificial Intelligence (AAAI)*, Jan. 2026.
- 3 **J. Park***, M.-Q. V. Bui*, J. L. G. Bello, J. Moon, J. Oh, and M. Kim, “SplineGS: Robust Motion-Adaptive Spline for Real-Time Dynamic 3D Gaussians from Monocular Video,” in *Proceedings of the IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR)*, Jun. 2025.
- 4 M.-Q. V. Bui*, **J. Park***, J. Oh, and M. Kim, “MoBluRF: Motion Deblurring Neural Radiance Fields for Blurry Monocular Video,” *IEEE Transactions on Pattern Analysis and Machine Intelligence (TPAMI)*, vol. 47, no. 9, pp. 7752–7770, 2025.

- 5 **J. Park**, J. Lee, and M. Kim, "COMPASS: High-Efficiency Deep Image Compression with Arbitrary-scale Spatial Scalability," in *Proceedings of the IEEE/CVF International Conference on Computer Vision (ICCV)*, Oct. 2023, pp. 12 826–12 835.
- 6 C. O. Ancuti, C. Ancuti, F.-A. Vasluianu, R. Timofte, and [48 others, including **J. Park**], "NTIRE 2020 Challenge on NonHomogeneous Dehazing," in *Proceedings of the IEEE/CVF Conference on Computer Vision and Pattern Recognition Workshops (CVPRW)*, 2020, pp. 490–491.

Domestic Journals & Conferences

- 1 **J. Park** and M. Kim, "Transformer-based Image Compression Framework of Spatial Scalability," in *Korea Institute of Broadcast and Media Engineers (KIBME) Workshops*, Jun. 2023.
- 2 **J. Park**, G. Youk, and M. Kim, "SAR Image Target Detection based on Attention YOLOv4," *Journal of the Korea Institute of Military Science and Technology (KIMST)*, vol. 25, no. 5, pp. 443–461, 2022.

Research Project Experience

- 04.2022 – 08.2026  **Deep Learning Based Visual Representational Learning and Rendering of Static and Dynamic Scenes**
supported by SW STAR LAB (IITP)
- Proposed a COLMAP-free dynamic 3D reconstruction framework via motion-adaptive spline deformation of 3D Gaussians.
 - Investigated and developed novel methods for dynamic 3D reconstruction from blurry monocular videos, comparing different neural representations.
 - Initially proposed a NeRF-based framework to achieve high-fidelity novel view synthesis, establishing a strong baseline for the deblurring task.
 - Subsequently developed a 3D Gaussian Splatting-based method, which enabled superior sharpness and rendering speed over the NeRF approach.
- 09.2022 – 05.2023  **AI-based Image Compression with Spatial Scalability**
supported by Electronics and Telecommunications Research Institute (ETRI)
- Proposed a learned, scalable image compression framework capable of decoding at any arbitrary (non-integer) scale from a single bitstream.

Patents

- 12.2025  KR10-2025-0189396 (Filed): Curve Model Based Rendering Method and Apparatus for Performing the Same
- 05.2024  KR10-2024-0071361 (Filed): Method, Apparatus and Recording Medium for Encoding/Decoding Image
- 08.2023  KR10-2563953 (Registered): Method and Apparatus for Image Translation Using Latent Features of Image

Honors & Awards

Scholarships

- 09.2022 – 08.2026  **Government Scholarship** for Ph.D. studies
- 09.2020 – 08.2022  **Government Scholarship** for M.S. studies
- 03.2015 – 08.2020  **National Scholarship** for B.S. studies

Awards

- 06.2023  **Best Paper Award** at Korea Institute of Military Science and Technology
-  **Outstanding Paper Award** at Korea Institute of Broadcast and Media Engineers

Skills

- Languages  **Korean** (Native), **English** (Conversational)
- Coding  Python, PyTorch, MATLAB, C