Sunghyun Woo

wshyun314@gmail.com | Google Scholar | LinkedIn | GitHub

Technical Skills

Programming: C++, Python, CUDA
Frameworks & Tools: PyTorch, OpenCV, Git, Docker, Conda
Research Areas: 3D Reconstruction, Neural Scene Representations, Novel View Synthesis, Computer Vision, Deep Learning

Experience

Research Intern Apr. 2025 – Present
Media for Machine Lab (M4ML), Dong-A University (Advisor: Prof. Jeongil Seo) *Busan, South Korea*

- Conduct research on neural scene representations and 3D reconstruction, with a focus on Neural Radiance Fields and 3D Gaussian Splatting.

Publications

Object-Aware Loss for Mask-Guided Mesh Reconstruction Based on 2D Gaussian Splatting 2026

- **Sunghyun Woo**, Jeongil Seo*, HeeKyung Lee
  Mathematics, vol. 14, no. 17, Art. no. 3221

Densification Rescheduling for 3D Gaussian Splatting Performance Improvement 2026

- **Sunghyun Woo**, Jeongil Seo*
  Proceedings of the Korean Institute of Broadcast and Media Engineers Conference, pp. 1047–1050

Comparative Study on the Performance of NeRF and 3DGS-Based Models 2025

- **Sunghyun Woo**, Jeongil Seo*
  Journal of Broadcast Engineering, vol. 30, no. 6, pp. 927–941

Quality-Enhanced 3D Gaussian Splatting via Tile Hard Mining and Edge-Weighted Densification 2025

- **Sunghyun Woo**, Jeongil Seo*
  Proceedings of the Korean Institute of Broadcast and Media Engineers Conference, pp. 24–27

Neural Radiance Fields and 3D Gaussian Splatting: Performance Comparison Analysis by Iteration 2025

- **Sunghyun Woo**, Jeongil Seo*
  Proceedings of the Korean Institute of Broadcast and Media Engineers Conference, pp. 1530–1533

* Corresponding author.

Honors & Awards

2025 – Excellence Award, Capstone Design Competition (Poster Presentation), Korean Institute of Broadcast and Media Engineers Summer Conference

Education

Dong-A University Busan, South Korea
B.S. in Computer Engineering; GPA: 4.13 / 4.5 *Mar. 2022 – Present*