Sumin Cho

suminyj@gmail.com | github.com/ccsum19 | Google Scholar

Research Interests

Controllable 3D Generative Models, Diffusion and Flow-based 3D Generation, Neural Representations, 3D Reconstruction and Editing.

Education

Korea Advanced Institute of Science and Technology (KAIST), South Korea — Sep 2024 – Present (Expected: Aug 2026)

- Master of Science, Graduate School of Culture Technology.
- Visual Media Lab (Computer Graphics Lab, Prof. Junyong Noh).
- **GPA:** 4.1/4.3. **Relevant Coursework:** Computer Vision, Computer Graphics, Deep Learning.

University of Georgia (Exchange Student), United States — Aug 2022 – Dec 2022

- Non-degree exchange program; coursework credited toward B.S. degree.

Sogang University, South Korea — Mar 2019 – Aug 2024

- Bachelor of Science in Art & Technology, Software, Media & Entertainment (Triple Major).
- **GPA:** 3.55/4.3.

Research Experience

Stylized 3D Editing from a Single Image via Attention Manipulation (In Submission), KAIST — Jul 2025 – Present

- Proposing a 3D stylization framework ensuring multi-view consistency via cross-view attention manipulation and propagation in diffusion models for 3D Gaussian Splatting.

Animatable Stylized 3D Face Mesh Generation (In Submission), KAIST — Jun 2025 – Present

- Developing a pipeline generating animatable 3D face meshes from stylized 2D images using FLAME-based initialization, remeshing, and end-to-end avatar reconstruction.

Anywear: Text-Driven Garment Generation via Mask Estimation (In Submission), KAIST — Nov 2024 – Present

- Developing a text-guided garment generation pipeline using a DGCNN-based highlighting model and diffusion for character-fitted garment meshes.

Sensory Kitchen: AI-Based Cooking Education System for Visually Impaired (Submitted), KAIST — Sep 2024 – Dec 2024

- Developed multimodal cooking assistant using generative AI and tactile interaction.

ConTEXTure: Consistent Multi-view Texture Generation for 3D Meshes (Published), Sogang Univ. — Feb 2024 – Jul 2024

- Developed simultaneous multi-view texture generation pipeline addressing viewpoint bias.

Projects

IllusionCraft: Diffusion-Optimized Textures for Transforming Surfaces, KAIST — Oct 2024 – Dec 2024

- Built multi-view optimization pipeline embedding multiple distinct images into a single 3D object surface to create view-dependent 3D visual illusions.

Few-Step Diffusion Model for Simpsons Dataset, KAIST Apr 2024 – Jun 2024

- Trained an EDM-style teacher and Consistency Distillation student for NFE=1/2/4 fast sampling, achieving competitive FID with drastically fewer evaluations.

3D Virtual Indoor Scene Generation via LLM and RAG, KAIST; KAI Oct 2024 – Nov 2025

- Developed automated 3D scene generation system (registered Korean software copyright).
- Implemented core technology for an industry demo exhibited at SIGGRAPH 2025.

Stylized Infinite-Zoom 3D Scene Generation, KAIST Oct 2024 – Dec 2024

- Built full 3D infinite-zoom pipeline combining Gaussian Splatting reconstruction, 3D style transfer, and seamless scene blending for continuous zoom transitions.

Industry Experience

Software Engineer (Freelance), Abear (Windly) Jul 2024 – Feb 2026

- Building an automated product image processing pipeline for e-commerce platforms using web crawling and computer vision-based image editing tools.

Media AI Lab Researcher, Sogang University Mar 2023 – Jul 2024

- Conducted research on computer vision and 3D content generation using diffusion models.

Founder & Product Developer, Handyy (Foot-tech Startup) Mar 2021 – Dec 2022

- Founded a tech startup; designed a 3D foot-measurement device and implemented an end-to-end web workflow for personalized footwear recommendations.

Honors and Awards

Certificate of Excellence – Outstanding TA for Education 4.0Q Program, KAIST Sep 2025

Excellence Award – Samsung Securities Co. Digital and IT Academic Program Dec 2023

Professional Service & Leadership

- **Reviewer**, ACM SIGCHI Conference on Human Factors in Computing Systems 2026 Posters.
- **Graduate Student Council President**, KAIST — Led academic initiatives and coordinated communication between graduate students and faculty.
- **Exhibition Staff**, CES 2024 & SIGGRAPH Asia 2025.

Additional Training

- **Naver Boostcamp AI Tech** – Computer Vision Track (2023-2024).
- **Google AI Bootcamp** – Computer Vision Specialization (2023).

Technical Skills

Programming: Python, C++, CUDA | **ML/Graphics:** PyTorch, Diffusers, Nerfstudio
3D Tools: Unity, Maya | **DevOps:** Linux, Git