

Jaehyeok Shim

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EDUCATION

Ulsan National Institute of Science & Technology (UNIST) Ph.D. in Artificial Intelligence; Advisor: Prof. Kyungdon Joo	Ulsan, Republic of Korea Mar. 2025 – Present
Ulsan National Institute of Science & Technology (UNIST) M.S. in Artificial Intelligence; Advisor: Prof. Kyungdon Joo – Research contribution: Diffusion-Based Signed-Distance-Fields for 3D Shape Generation (CVPR 2023).	Ulsan, Republic of Korea Sep. 2021 – Aug. 2023
Seoul National University of Science and Technology B.S. in Electrical and Information Engineering; Double Major in Unmanned Vehicles Software	Seoul, Republic of Korea Mar. 2015 – Aug. 2021

RESEARCH EXPERIENCE

Research Scientist Intern Adobe – Conducted research under the mentorship of Dr. Jaeshin Yoon.	Mar. 2025 – Jun. 2025 United States
Researcher Ulsan National Institute of Science & Technology (UNIST) – Designed latent models for 3D compression and generation under Prof. Kyungdon Joo. – Contributed to DITTO: Dual and Integrated Latent Topologies for Implicit 3D Reconstruction (CVPR 2024) and ContactGen: Contact-Guided Interactive 3D Human Generation for Partners (AAAI 2024).	Sep. 2023 – Feb. 2025 Ulsan, Republic of Korea
Sergeant, Information Systems Specialist Republic of Korea Army, 1st Division	Aug. 2016 – May 2018 Paju, Republic of Korea

PUBLICATIONS

- Trip-to-Gaussian: A Versatile Framework for Unconditional 3D Generation** | TMLR 2026
– Youngwoo Jeon, Inhyeok Choi, **Jaehyeok Shim**, Sangjune Park, Kyungdon Joo. [Project] [Paper] [Code]
– Coarse-to-fine unconditional 3D generation that converts triplane latents into high-quality 3D Gaussians.
- DITTO: Dual and Integrated Latent Topologies for Implicit 3D Reconstruction** | CVPR 2024
– **Jaehyeok Shim**, Kyungdon Joo. [Project] [Paper] [Code]
– Point-cloud-to-mesh reconstruction using complementary point and grid latent representations.
- ContactGen: Contact-Guided Interactive 3D Human Generation for Partners** | AAAI 2024
– Dongjun Gu, **Jaehyeok Shim**, Jaehoon Jang, Changwoo Kang, Kyungdon Joo. [Project] [Paper] [Code]
– Guided-diffusion model that generates human poses with physically plausible partner interactions.
- Diffusion-Based Signed-Distance-Fields for 3D Shape Generation** | CVPR 2023
– **Jaehyeok Shim**, Changwoo Kang, Kyungdon Joo. [Project] [Paper] [Code]
– Coarse-to-fine diffusion framework for high-fidelity 3D shape generation from signed-distance fields.

ACADEMIC CONTRIBUTIONS

Peer Reviewer | ECCV 2026, CVPR 2026, NeurIPS 2025, ICCV 2025, CVPR 2025, IEEE TIPMar. 2024 – Apr. 2026

OPEN-SOURCE PROJECTS

- kitsu** | PyTorch, DDP
– PyTorch boilerplate stack with a distributed-data-parallel trainer similar to PyTorch Lightning.
- space-filling-pytorch** | Triton
– Library implementing space-filling curves, including Hilbert curves and Z-order, in Triton.
- fast-GeM** | Triton
– Triton implementation of generalized mean pooling.
- GEGLU-triton** | Triton
– Triton implementation of gated exponential linear units.