Jaehyeok Shim (심재혁)

Curriculum Vitae

- Email: jh.shim.gg@gmail.com
- Homepage: https://kitsunetic.github.io
- Github: https://github.com/kitsunetic

Education

Ph.D. Ulsan National Institute of Science & Technology (UNIST), Korea 2025/03 -
- Major: Artificial Intelligence
- Advisor: Prof. Kyungdon Joo

M.S. Ulsan National Institute of Science & Technology (UNIST), Korea 2021/09 - 2023/08
- Major: Artificial Intelligence
- Advisor: Prof. Kyungdon Joo
- Achievements:
  - Diffusion-Based Signed-Distance-Fields for 3D Shape Generation (CVPR 2023)

B.S. Seoul National University of Science and Technology, Korea 2015/03 - 2021/08
- Major: Electrical and Information Engineering
- Double Major: Unmanned Vehicles Software Program
- Advisor: Prof. Yeejin Lee
- Military service 2016/08 - 2018/05

Experiences

Adobe, United States 2025/03 - 2025/06
- Title: Research Scientist Intern
- Mentor: Dr. Jaeshin Yoon

Ulsan National Institute of Science & Technology (UNIST), Korea 2023/09 - 2025/02
- Title: Researcher
- Mentor: Prof. Kyungdon Joo
- Objective: Designing an effective latent model for 3D compression and generation.
- Achievements:
  - DITTO: Dual and Integrated Latent Topologies for Implicit 3D Reconstruction (CVPR 2024)
  - ContactGen: Contact-Guided Interactive 3D Human Generation for Partners (AAAI 2024)

Militery Service (South Korea) 2016/08 - 2018/05
- Title: Sergeant, Information Systems Specialist (Republic of Korea Army)

PUBLICACTIONS

Trip-to-Gaussian: A Versatile Framework for Unconditional 3D Generation

Youngwoo Jeon, Inhyeok Choi, ***Jaehyeok Shim****, Sangjune Park, Kyungdon Joo*

[Project Page] [Paper] [Code] **(TMLR 2026)**

`Trip2GS` proposes a coarse-to-fine unconditional 3D generation framework that converts triplane latents into high-quality 3D Gaussians for object- and scene-level generation.

DITTO: Dual and Integrated Latent Topologies for Implicit 3D Reconstruction

Jaehyeok Shim*, Kyungdon Joo*

[Project Page] [Paper] [Code] **(CVPR 2024)**

`DITTO` achieves state-of-the-art performance in point cloud to 3D mesh reconstruction by proposing novel network that combines strengths of point cloud latent and grid latent representations.

ContactGen: Contact-Guided Interactive 3D Human Generation for Partners

Dongjun Gu, ***Jaehyeok Shim****, Jaehoon Jang, Changwoo Kang, Kyungdon Joo*

[Project Page] [Paper] [Code] **(AAAI 2024)**

`ContactGen` proposes a human pose generative model based on human-to-human interaction. Given partner's pose, `ContactGen` generates human pose using Guided Diffusion with interaction guidance.

Diffusion-Based Signed-Distance-Fields for 3D Shape Generation

Jaehyeok Shim*, Changwoo Kang, Kyungdon Joo*

[Project Page] [Paper] [Code] **(CVPR 2023)**

`SDF-Diffusion` proposes a 3D shape generative model based on TSDF voxels. Motivated by Cascade Diffusion, this paper introduces a coarse-to-fine 3D shape generation method, reducing the memory and computational cost of voxel representations.

ACADEMIC CONTRIBUTIONS

Reviewer Activity: ECCV 2026	2026/04
Reviewer Activity: CVPR 2026	2026/01
Reviewer Activity: NeurIPS 2025	2025/05
Reviewer Activity: ICCV 2025	2025/04
Reviewer Activity: CVPR 2025	2025/01
Reviewer Activity: IEEE Transactions on Image Processing (TIP)	2024/03

OPEN SOURCE PROJECTS

kitsu [Github]

Code stack of Pytorch boilerplate codes including a DDP-based trainer similar to pytorch-lightning.

space-filling-pytorch [Github]

Library for Space Filling Curve (e.g., Hilbert-Curve, Z-Order) implementations based on Triton.

fast-GeM [Github]

Generalized Mean Pooling (GeM) implementation using Triton.

GEGLU-triton [Github]

Triton implementation of GEGLU.