

# JAEHYEOK SHIM (심재혁)

## Curriculum Vitae

- Email: [jh.shim.gg@gmail.com](mailto:jh.shim.gg@gmail.com)
- Homepage: <https://kitsunetic.github.io>
- Github: <https://github.com/kitsunetic>

## EDUCATION

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- 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

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

## PUBLICATIONS

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### 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

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Reviewer Activity: NeurIPS 2025	2025/05
Reviewer Activity: ICCV 2025	2025/04
Reviewer Activity: ACM Transactions on Image Processing (TIP)	2024/03

## OPEN SOURCE PROJECTS

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**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.

## AI COMPETITIONS

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KYOWON Group OCR Challenge, DAICON, Korea. (Rank 7/430; top 2%)	2022/12
Ego-Vision Hand Gesture Recognition AI Contest, DAICON, Korea. (Rank 3/290; top 1%)	2021/06
News Topic Classification AI Contest, DAICON, Korea. (Rank 3/256; top 1%)	2021/05
Predicting Danger of System Log Messages, DAICON, Korea. (Rank 2/152; top 1%)	2021/04
Finding Human Key-Points from Motion Images, DAICON, Korea. (Rank 1/156; top 1%)	2021/02