Curriculum Vitae

Hwan Heo

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RESEARCH INTEREST
Computer Vision
Neural Rendering; Radiance Fields & Gaussian Splatting
Visual Scene Understanding

EDUCATION

Master's degree in Computer Science & Engineering — Sep 2020 - Feb 2023
Korea University, *Advisor: Prof. Hyunwoo J. Kim*

Bachelor's degree in Computer Science & Engineering — Mar 2015 - Aug 2020
Korea University, *Advisor: Prof. HeuiSeok Lim*

EXPERIENCE

AI Researcher — Feb 2024 - present
NCSoft Graphics AI Lab, *3D Generation Team*
- 3D Asset Generation; 3D Latent Diffusion & Texture Synthesis

AI Researcher — Mar 2023 - Feb 2024
NCSoft Vision AI Lab, *Neural Rendering Team*
- Accelerated NeRF Face Avatar w/ Multi-Camera
- Neural Rendering scene in Graphical Engine

AI Researcher, Intern — Jul 2022 - Dec 2022
NAVER AI Lab, *Mentor: Ph.D. Jin-Hwa Kim*
- NeRF Research Project: Robust Camera Pose Refinement for Multi-Resolution Hash Encoding [ICML '23]

PUBLICATION

[1] **Temporally Sparse Adversarial Perturbations on Videos**
H. Heo, D. Ko, J. Lee, Y. Hong, H. J. Kim** [IEEE Access 2021] 🔗

[2] **Consistency Learning via Decoding Path Augmentation for Transformers in Human Object Interaction Detection**
*J. Park, S. Lee, **H. Heo**, H. Choi, H. J. Kim** [CVPR 2022] 🔗

[3] **Domain Generalization Emerges from Dreaming**
***H. Heo**, Y. Oh, J. Lee, H. J. Kim** [preprint] 🔗

[4] **Robust Camera Pose Refinement for Multi-Resolution Hash Encoding**
H. Heo, T. Kim, J. Lee, J. Lee, S. Kim, H. J. Kim, JH. Kim** [ICML 2023] ☍

[5] **Semantic-aware Occlusion Filtering Neural Radiance Fields in the Wild**
*J. Lee, I. Kim, **H. Heo**, H. J. Kim** [preprint] ☍

[6] **Panoramic Image-to-Image Translation**
*S. Kim, J. Kim, T. Kim, **H. Heo**, S. Kim*, J. Lee*, J.H. Kim** [preprint] ☍

[7] **CaPa: Carve-n-Paint Synthesis for Efficient 4K Textured Mesh Generation**
***Hwan Heo**, J. Kim, S. Lee, J. Wi, J. Choi, S. Ahn* [under review] ☍

PROJECT	***Object Detection for Diagnosis of Infectious Diseases*** Aug 2020 - Jul 2022 Korea University and Korea University Guro Hospital
	AI-based 3D Rendering in Game & Graphic Engine ☍ May 2023 - Dec 2023 NCSoft Research
	3D Asset Generation; 3D Latent Diffusion & Texture Synthesis ☍ Jul 2024 - Dec 2024 NCSoft Research
COMPUTER SKILLS	*Languages & Software:* Python, PyTorch, CUDA
PROFESSIONAL ACTIVITIES	*Technical Assistant* • Object Detection Tutorial in KCCV 2022 • Object Detection, Adversarial Attack and GAN Tutorial in Korea University-LG Electronics Winter AI Workshop 2022 *Teaching Assistant* • Artificial Intelligence (COSE361) in 2021 spring and 2022 spring *Reviewers* • Computer Vision and Pattern Recognition (CVPR) • European Conference on Computer Vision (ECCV) • Neural Information Processing Systems (NeurIPS)