Jinwoo Kim

Contact Information

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Homepage: https://hello-jinwoo.github.io/

Research Interests

Current: **Computational/Generative Photography**
Previous: Object-Centric Learning, Neuro-Symbolic AI, Image/Video Perception

Education

Ph.D. in Computer Science, **Yonsei University**, Seoul, Korea — Mar 2021 -
Advisor: Prof. Seon Joo Kim
GPA: 4.25/4.30
Thesis: Data-Centric Approaches for Compositional and Personalized Image Editing.

B.S. in Computer Science, **Yonsei University**, Seoul, Korea — Mar 2018 - Feb 2021
GPA: 3.83/4.30 (Major: 3.99/4.30)

Computer Engineering, **Sungkyunkwan University**, Suwon, Korea — Mar 2016 - Feb 2018
GPA: 4.25/4.50 (Major: 4.50/4.50)

Research Experience

Naver Clova, Seongnam, Korea — Dec 2021 - Jun 2022
(Research Intern @Video Understanding)
- Image & Video Representation Learning

Hyundai Mobis, Seoul, Korea — Mar 2019 - Jul 2019
(Research Intern @Data Science)
- Machine Reading Comprehension

Publications

(* indicates equal contribution)

Google Scholar

Jaeseong Lee, **Jinwoo Kim**, Jinho Jeong, Seon Joo Kim, "Reading the Unreadable: Text-Aware Image Super-Resolution Needs Reasoning." In ***NeurIPS***, 2026.

Jinho Kim, **Jinwoo Kim**, Seon Joo Kim, "Dual-Output Multi-Exposure HDR Reconstruction via SDR Fusion and Gain Map Inverse Tone Mapping." In ***ECCV***, 2026.

Sangmin Han, Jinho Kim, **Jinwoo Kim**, Dongyoung Kim, Seon Joo Kim, "LIIFusion: Coarse-to-fine Framework for Generative MEF via Implicit Neural Representation." In ***ECCV***, 2026.

Jihye Yoo, Jaemin Kim, **Jinwoo Kim**, Seon Joo Kim, "Tone-Aware Diffusion : Enabling Tone-on-Tone and Tone-in-Tone Generation." In ***CVPRW***, Human-Interactive Generation and Editing ***best paper runner-up***, 2026.

Taehyeon Kim, **Jinwoo Kim**, Seon Joo Kim, "FlowISP: Latent Space ISP Transfer via Conditional Flow Matching." In ***CVPRW***, Low-Level Vision Frontiers, 2026.

Jaemin Kim, **Jinwoo Kim**, Seon Joo Kim, "Freeze the Structure, Free the Color: Fourier-Domain Training for Unpaired Smartphone ISP." In ***CVPRW***, New Trends in Image Restoration and Enhancement, 2026.

Jinwoo Kim, Jihye Yoo, Seon Joo Kim, "Learning Personalized Photographic Style: A Real-World Preference Dataset and DPO-Based Diffusion Framework." In ***CVPR***, 2026.

Sangmin Han, Jinho Jeong **Jinwoo Kim**, Seon Joo Kim, "Accelerating Diffusion Model for High Resolution Image Generation with Adaptive Path Tracing." In *arXiv*, 2025.

Jinho Jeong, Sangmin Han, **Jinwoo Kim**, Seon Joo Kim, "Latent space Super-Resolution for

Higher-Resolution Image Generation with Diffusion Models." In ***CVPR***, 2025.

Jinwoo Kim, Sangmin Han, Jinho Jeong, Seon Joo Kim, "Large-Scale Real-Captured Object Recomposition Image Dataset." In ***CVPR***, 2025.

Jiwoo Choi, **Jinwoo Kim**, Sejong Yang, Seon Joo Kim, "Visual Fidelity vs. Robustness: Trade-Off Analysis of Image Adversarial Watermark Mitigated by SSIM Loss." In ***ICLRW***, GenAI Watermarking, 2025.

Jinho Jeong, **Jinwoo Kim**, Yeonghyeon Jo, Seon Joo Kim, "Accelerating Large Image Super-Resolution Networks with Pixel-Level Classification." In ***ECCV***, 2024.

Jinwoo Kim*, Janghyuk Choi*, Jaehyun Kang, Changyeon Lee, Ho-Jin Choi, Seon Joo Kim, "Towards Interpretable Controllability in Object-Centric Learning." In ***CVPRW***, Causal and Object-Centric Representations for Robotics, 2024.

Dongyoung Kim, **Jinwoo Kim**, Junsang Yu, Seon Joo Kim, "Attentive Illumination Decomposition Model for Multi-Illuminant White Balancing." In ***CVPR***, 2024.

Jinwoo Kim*, Janghyuk Choi*, Ho-Jin Choi, Seon Joo Kim, "Shepherding Slots to Objects: Towards Stable and Robust Object-Centric Learning." In ***CVPR***, 2023.

Hyolim Kang*, **Jinwoo Kim***, Taehyun Kim, Seon Joo Kim, "Unsupervised Boundary Contrastive Learning for Generic Event Boundary Detection." In ***CVPR***, 2022.

Hyolim Kang, **Jinwoo Kim**, Kyungmin Kim, Taehyun Kim, Seon Joo Kim, "Winning the CVPR'2021 Kinetics- GEBD Challenge: Contrastive Learning Approach." In ***CVPRW***, Long-from Video Understanding Challenge Workshop, 2021.

Dongyoung Kim, **Jinwoo Kim**, Seonghyeon Nam, Dongwoo Lee, Yeonkyunk Lee, Nahyup Kang, Hyong-Euk Lee, Byungin Yu, Jae-joon Han, Seon Joo Kim, "Large Scale Multi-Illuminant Dataset for Developing White Balance Algorithm under Mixed Illumination." In ***ICCV***, 2021.

Projects

(* I served as research lead)

***** Samsung Future Technology Development Program - **"Diffusion Camera: A Foundation Model for New In-camera Image Processing"** 2025-2026

***** Samsung Electronics System LSI - "Enhancing Photographic Quality with AI-powered Deep ISP Modules" 2025-2026

Samsung Electronics Samsung Research (SR) - "Development of User-Friendly High-Resolution Image-to-Video Generation Algorithm" 2025

***** Samsung Electronics Mobile Experience (MX) - "Development of Un-/Self-supervised Object Manipulation Algorithm" 2024

Samsung Electronics Mobile Experience (MX) - "Development of Unified Super Resolution Model for Image and Video Restoration" 2023

Samsung Advanced Institute of Technology (SAIT) - "Development of Deep Spatially Varying Auto White Balance (AWB) Algorithm" 2021

Awards and Honors

Best Paper Runner-Up in HIGen Workshop @CVPRW'26 Jun 2026

3rd Place in NTIRE 2026 Unpaired ISP Challenge @ CVPRW'26 Jun 2026

Final Scholarship's List, Qualcomm Innovation Fellowship Korea	Nov 2022
Excellent Paper Award, Yonsei University AI Workshop	Oct 2022
1st Place in Track 1, Long-form Video Understanding Challenge @ CVPRW'21	Jun 2021
Excellent Research Exhibition, Dept. of Computer Science, Yonsei University	Dec 2020
Best Capstone Design Award, Dept. of Computer Science, Yonsei University	Dec 2020
Academic Achievement Award, Yonsei University	Dec 2020
Dean's List, Sungkyunkwan University	Dec 2016, Jun 2017

Teaching Experience

Samsung Electronics

- Lecture Assistant of Samsung AI Expert (2022, 2023, 2024, 2025, 2026)

Yonsei University, Seoul, Korea

- TA of Introduction to AI and its Application (Fall 2023)
- TA of Object Oriented Programming (Fall 2022)
- TA of Software Programming (Fall 2021, Spring 2022)
- TA of Computational Thinking and Software Programming (Winter 2018)

Sungkyunkwan University, Suwon, Korea

- Tutor of Computer Programming for Engineers (Spring 2017), **Best Tutor Award**

Academic Services

Reviewer

- **Conferences**: CVPR (2023˜), NeurIPS (2023˜), ICML (2024), ICCV (2025˜), ECCV (2024˜), AAAI (2025), ACCV (2024)
- **Journals**: TPAMI, TIP
- **Top Reviewer**: NeurIPS 2026