Jihye Park

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PERSONAL PROFILE

Dedicated AI Researcher focused on pushing the boundaries of **Generative AI**. Extensive experience in multi-modal generative research, specifically in audio-driven synthesis and text-guided image translation, resulting in high-impact academic contributions at top-tier conferences. Transitioned this expertise into the field of Image Restoration, where I currently develop and optimize generative pipelines for denoising and super-resolution to deliver enhanced visual experiences.

EDUCATION

Korea University — Seoul, South Korea
Master in Computer science — *Mar. 2022 - Current*

Korea University — Seoul, South Korea
Bachelor in Mathematics — *Mar. 2017 - Feb. 2022*

WORK EXPERIENCE

Samsung Electronics, MX — Suwon, South Korea
AI Researcher — *Mar. 2024 - Present*

- Develop high-performance image restoration solutions (Denoising, Super-Resolution) by leveraging state-of-the-art Generative Models, specifically focusing on Diffusion models.
- Optimize generative AI pipelines for on-device deployment, enhancing the visual quality of mobile photography in Galaxy devices.
- Engineer advanced restoration models specialized for RAW data processing to maximize signal-to-noise ratio and detail preservation.

Computer Vision — Seoul, South Korea
Teaching Assistant — *Sep. 2023 - Feb. 2024*

Linear Algebra Course — Seoul, South Korea
Teaching Assistant — *Mar. 2022 - Jun. 2022*

Korea University CVLAB — Seoul, South Korea
Undergraduate Researcher — *Jan. 2021 - Feb. 2022*

- Participate in research related to generative adversarial model and image translation

PROJECTS

National project — Seoul, South Korea
Talking face Generation — *Mar. 2022 - Nov. 2022*

- Study multi-modal learning using audio and image domain in order to understand and utilize the differences between two domains
- Design a model using the GAN inversion method to learn the mapping between audio and image in the latent space
- Propose a model that can generate virtual humans using technologies such as face swap and teeth generative method

National project Seoul, South Korea
Smart Child Care Project *Mar. 2022 - Sep. 2022*

- Propose a pose estimation and object detection method that can detect children's behavior
- Improve the performance of the proposed model by adapting a pre-trained model with a large dataset to the children dataset.

HYUNDAI MOBIS Seoul, South Korea
Complex Scene Translation *Mar. 2023 - Nov. 2023*

- Attempt to solve the instance-aware translation task, which involves changing the domain (e.g, Sunny, Night) while preserving detailed instance information in complex road scenes, using a diffusion model.

Samsung Electronics Seoul, South Korea
Transformer-based Restoration Model *Oct. 2023 - Dec. 2023*

- Study various restoration models using the transformer to prove the transformer's performance.

PUBLICATIONS

International Journal

[1] Soohyun Kim, Jongbeom Baek, **Jihye Park**, Eunjae Ha, Homin Jung, Taeyoung Lee, and Seungryong Kim. "InstaFormer++: Multi-Domain Instance-Aware Image-to-Image Translation with Transformer". In: ***IJCV*** (2023).

International Conference

[1] Jaewon Min*, Jin Hyeon Kim*, Paul Hyunbin Cho, Jaeeun Lee, **Jihye Park**, Minkyu Park, Sangpil Kim, Hyunhee Park Park, and Seungryong Kim. "Text-Aware Image Restoration with Diffusion Models". In: ***ICLR*** (2026).

[2] Seyeon Kim*, Siyoon Jin*, **Jihye Park***, Kihong Kim, Jiyoung Kim, and Seungryong Kim. "MoDiTalker: Motion-Enhanced Diffusion Model for High-Fidelity Talking Head Generation". In: ***AAAI*** (2025).

[3] Kihong Kim, Haneol Lee, **Jihye Park**, Seyeon Kim, Kwanghee Lee, Seungryong Kim, and Jaejun Yoo. "Hybrid Video Diffusion Models with 2D Triplane and 3D Wavelet Representation". In: ***ECCV*** (2024).

[4] **Jihye Park***, Sunwoo Kim*, Soohyun Kim*, Seokju Cho, Jaejun Yoo, Youngjung Uh, and Seungryong Kim. "LANIT: Language-Driven Image-to-Image Translation for Unlabeled Data". In: ***CVPR*** (2023).

[5] Soohyun Kim, Jongbeom Baek, **Jihye Park**, Gyeongnyeon Kim, and Seungryong Kim. "Instaformer:Instance-aware image-to-image translation with transformer". In: ***CVPR*** (2022).

[6] Yunsung Lee*, Gyuseong Lee*, Kwangrok Ryoo*, Hyojun Go*, **Jihye Park***, and Seungryong Kim. "Toward Flexible Inductive Bias via Progressive Reparameterization Scheduling". In: ***ECCVW*** (2022).

AWARDS

Silver Prize | 2022 Workshop of Image Processing and Image Understanding (IPIU) 2022
Award for Academic Excellence | Korea Unviersity 2021
Award for Academic Excellence | Korea Unviersity 2020

ACADEMIC SERVICES

Reviewer | Computer Vision and Pattern Recognition (CVPR) 2023
Teaching Assistant | 삼성전자 AI 응용 시각 8월 과정 2023

SKILLS

Programming
Python

Frameworks
Pytorch

Tools
Git, Docker, Linux, Shell (Bash/Zsh), LaTeX(Overleaf/R Markdown)