

# Jihye Park

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## EDUCATION

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### Korea University

*Master in Computer science*

Seoul, South Korea

Mar. 2022 - Current

### Korea University

*Bachelor in Mathematics*

Seoul, South Korea

Mar. 2017 - Feb. 2022

## WORK EXPERIENCE

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### Samsung Electronics, MX

*AI Researcher*

Suwon, South Korea

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

*Teaching Assistant*

Seoul, South Korea

Sep. 2023 - Feb. 2024

### Linear Algebra Course

*Teaching Assistant*

Seoul, South Korea

Mar. 2022 - Jun. 2022

### Korea University CVLAB

*Undergraduate Researcher*

Seoul, South Korea

Jan. 2021 - Feb. 2022

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

## PROJECTS

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### National project

*Talking face Generation*

Seoul, South Korea

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

*Smart Child Care Project*

Seoul, South Korea

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

*Complex Scene Translation*

Seoul, South Korea

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**

*Transformer-based Restoration Model*

Seoul, South Korea

Oct. 2023 - Dec. 2023

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

## PUBLICATIONS

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### 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, Jaeun 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

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<b>Silver Prize</b>   2022 Workshop of Image Processing and Image Understanding (IPIU)	2022
<b>Award for Academic Excellence</b>   Korea University	2021
<b>Award for Academic Excellence</b>   Korea University	2020

## ACADEMIC SERVICES

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<b>Reviewer</b>   Computer Vision and Pattern Recognition (CVPR)	2023
<b>Teaching Assistant</b>   삼성전자 AI 응용 시작 8월 과정	2023

## SKILLS

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### Programming

Python

### Frameworks

Pytorch

### Tools

Git, Docker, Linux, Shell (Bash/Zsh), L<sup>A</sup>T<sub>E</sub>X(Overleaf/R Markdown)