

# HYEONSEO YU

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 Website | Scholar | LinkedIn | GitHub

## Research Interests

I am an M.S. student at KAIST working on 3D/4D computer vision and multimodal learning. My long-term goal is to bridge 3D/4D perception and multimodal reasoning to enable intelligent agents to understand and interact with the physical world, with applications in robotics and embodied AI.

### Current focus:

- 3D/4D Reconstruction
- Vision-Language and Multimodal Models
- 3D Feature Representation

## Education

Korea Advanced Institute of Science and Technology (KAIST)

M.S. in Artificial Intelligence @ CVLAB

Seoul, Korea

2026.09 - Present

Hanyang University

B.S. in Information Systems

Seoul, Korea

2022.03 - 2026.02

- GPA: 4.49/4.50, Summa Cum Laude (ranked 1st)

Daewon Foreign Language High School

Department of French

Seoul, Korea

2019.03 - 2022.02

## Publications

C: Conference, W: Workshop, P: Preprint, \*: Equal Contribution, †: Corresponding Author

### Peer-Reviewed Conference Publications

[C1] **Imagine3D-LLM: Teaching MLLMs to Imagine 3D Scenes Before Answering** [Paper](#) | [Project](#) | [Code](#)

Jaewoo Jung, Hyeonseo Yu, Honggyu An, Jisang Han, Mungyeom Kim, Minkyong Jeon, Heeseong Shin, Won-Jun Moon, Federico Tombari, Daniel Barath, Marc Pollefeys<sup>†</sup>, Seungryong Kim<sup>†</sup>, Sunghwan Hong<sup>†</sup>

*Neural Information Processing Systems (NeurIPS)*, 2026.

### Preprints & Under Review

[P3] **Can Learning to Answer Spatial Questions Improve Novel-View Generation?** [Paper](#) | [Project](#) | [Code](#)

Jahyeok Koo, Hyeonseo Yu, Seungho Jang, Jaewoo Jung, Jiwon Kang, Seokju Cho

*Under Review*, 2026.

[P2] **FL4N: Feed-forward Latent Model for 4D Novel View Synthesis** [Paper](#) | [Project](#) | [Code](#)

Eunbeen Hong, Hyeonseo Yu, Honggyu An, Jooho Son, Hyunah Ko, Soowon Son, Chaehyun Kim, Jahyeok Koo, Jisoo Kim, Junhwa Hur<sup>†</sup>, Seungryong Kim<sup>†</sup>

*Under Review*, 2026.

[P1] **Learning Temporally-Aware Compact Gaussians for Feed-Forward 4D Reconstruction** [Paper](#) | [Project](#) | [Code](#)

Mungyeom Kim<sup>\*</sup>, Minkyong Jeon<sup>\*</sup>, Honggyu An<sup>\*</sup>, Jaewoo Jung, Hyunah Ko, Jisang Han, Hyeonseo Yu, Donghwan Shin, Sunghwan Hong, Takuya Narihira, Kazumi Fukuda, Yuki Mitsufuji<sup>†</sup>, Seungryong Kim<sup>†</sup>

*Preprint*, 2026.

## Research Experience

- |                                                                                                                                                                                                                         |                   |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|
| <b>KAIST, CVLAB</b>   Seoul, Korea                                                                                                                                                                                      | 2025.07 - 2026.08 |
| <ul style="list-style-type: none"><li>• Undergraduate Intern, advised by Prof. Seungryong Kim</li><li>• Conducted research on 4D novel view synthesis / reconstruction, and VLM-based 3D scene understanding.</li></ul> |                   |
| <b>Korea Institute of Science and Technology</b>   Seoul, Korea                                                                                                                                                         | 2024.12 - 2025.06 |
| <ul style="list-style-type: none"><li>• Undergraduate Intern, advised by Ph.D Soomin Kim and Ph.D Hwasup Lim</li><li>• Enhanced text-to-3D layout generation accuracy through improved spatial reasoning.</li></ul>     |                   |

## Projects

- |                                                                                                                                                                                                                                 |                   |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|
| <b>VOICE: A Multimodal Routine Recommender for Any Circumstances</b>                                                                                                                                                            | 2024.09 - 2024.12 |
| <i>Project Link: <a href="https://github.com/CSE-VOICE">https://github.com/CSE-VOICE</a></i>                                                                                                                                    |                   |
| <ul style="list-style-type: none"><li>• Excellence Award (2nd Place), LG-Hanyang IC-PBL Project</li><li>• Developed an AI service that recommends optimal smart home routines tailored to diverse user circumstances.</li></ul> |                   |

## Awards and Honors

- |                                                                          |             |
|--------------------------------------------------------------------------|-------------|
| <b>Dean's Award (Top 1)</b> , College of Engineering, Hanyang University | 2026.02     |
| <b>Excellence Award (2nd Place)</b> , Hanyang University IC-PBL Project  | 2024.12     |
| <b>Academic Excellence Award</b> , Hanyang University                    | 2022 - 2025 |
| <b>Academic Scholarship</b> , Hanyang University                         | 2022 - 2024 |