Youngmin Kim

M.S. Student at KAIST

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Education

Sep. 2026 – Present
M.S. in Artificial Intelligence, *KAIST*, Daejeon, Korea.
Kim Jaechul Graduate School of AI
Advisor: Jong Chul Ye
Concentration: 3D Vision and Robotics

Feb. 2023 – Aug. 2026
B.S. in Computer Science and Engineering, *Korea University*, Seoul, Korea, *GPA: 4.3 / 4.5.*
Department of Computer Science and Engineering
Advisor: Jaehoon Lee
Early graduation (3.5 years)

Research Interests

3D Vision, Robotics, Vision-Language-Action (VLA), World Action Models (WAM), Diffusion Models, Generative Modeling, Medical Imaging

Publications

[1] Seonghyun Jin*, **Youngmin Kim***, Sunwoo Park*, Jong Chul Ye, "CRePE: Curved Ray Expectation Positional Encoding for Unified-Camera-Controlled Video Generation", *arXiv* (2026), arXiv:2605.12938

[2] **Youngmin Kim***, Jaeyun Shin*, Jeongchan Kim*, Taehoon Lee, Jaemin Kim, Peter Hsu, Jelle Veraart, Jong Chul Ye, "DMD-augmented Unpaired Neural Schrödinger Bridge for Ultra-Low Field MRI Enhancement", *arXiv* (2026), arXiv:2603.03769

[3] **Youngmin Kim***, Jeongchan Kim*, Taehoon Lee*, Jaeyun Shin*, Suhyeon Lee, Jong Chul Ye, "Ultra-Low-Field Brain MRI Enhancement using Resfusion and Residual Artifact Suppression Network", *MICCAI ULF-EnC Challenge Workshop* (2026)

[4] **Youngmin Kim**, Hogeon Park, Heonchang Yu, "Performance Analysis of Kubernetes Traffic Scheduling Algorithms in Homogeneous and Heterogeneous Environments", *KCC* (2025)

[5] **Youngmin Kim**, Wonyeong Jang, Taehee Jeong, "Improving Visual Question Answering via Prompt-Level Adaptation and Knowledge-Driven Fine-Tuning: Solution of Meta CRAG-MM Challenge 2025", *Proceedings of the KDD Cup Workshop on CRAG-MM* (2025)

* These authors contributed equally.

Research Experience

Sep. 2026 – Present
Graduate Researcher, *BISPL (BioImaging, Signal Processing, & machine Learning Lab)*, KAIST, Korea.
Advisor: Jong Chul Ye

Jun. 2025 – Aug. 2026
Research Intern, *BISPL (BioImaging, Signal Processing, & machine Learning Lab)*, KAIST, Korea.
Advisor: Jong Chul Ye

Jun. 2024 – Jun. 2025 **Research Intern**, *Distributed and Cloud Computing Lab*, Korea University, Korea.
Network latency in Kubernetes.

Awards & Honors

Jan. 2025 ***Academic Excellence Award***, Korea University, Korea

2024 – 2025 ***Semester Highest Honors*** (×3), Korea University, Korea
Feb. 2025, Aug. 2024, Feb. 2024

Aug. 2023 ***Semester Honors***, Korea University, Korea

Projects

Jun. 2026 – Aug. 2026 **CRePE — Unified-Camera-Controlled Video Generation**, *BISPL*, Korea.
Curved Ray Expectation Positional Encoding; see Publications [1].

Aug. 2025 – Mar. 2026 **Medical Foundational Model**, *BISPL*, Korea.

Jun. 2025 – Present **ULF to High-field MRI Image Enhancement**, *BISPL*, Korea.

Nov. 2025 – Dec. 2025 **Short Movie Using 3DGS**, *Korea University*, Korea.

Dec. 2024 – Present **Kaist Map**, *KAIST Madcamp*, Korea.
Backend developer of the Kaist Map app.

Jul. 2024 – Mar. 2025 **Execution Time Analysis of Kubernetes Scheduler Algorithms in Homogeneous and Heterogeneous Environments**, *Distributed and Cloud Computing Lab*, Korea.

Technical Skills

Languages	Python, C++
Frameworks	PyTorch
Simulation	MuJoCo, Isaac Sim, LIBERO
Models	Vision-Language-Action (VLA), diffusion models, video generation models