

JiHyuk Byun

Contact Information

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Research Interests

Computer Vision / Deep Learning

Agentic AI, 3D Vision, Vision Language Model (VLM), Multimodal Learning

Education

Yonsei University, Seoul, Korea

M.S. in Artificial Intelligence

Mar. 2024 – Aug. 2026 (exp.)

Advisor: [Prof. Seon Joo Kim](#)

GPA: 4.12/4.3

B.S. in Electrical and Electronic Engineering

Mar. 2018 – Aug. 2024

GPA: 3.92/4.3 (Major: 4.03/4.3)

Republic of Korean Air Force, Honorable Discharge

(2019.10 – 2021.08)

Research Experience

Graduate Researcher

Sep. 2024 – Present

Advisor: Prof. Seon Joo Kim (CIPLAB, Yonsei University)

- Web Agent Evaluation & Benchmark (COLM'26, with Microsoft Research)
- 3D Preference-Aligned Quality Assessment (IPIU'26)

Undergraduate Researcher

Jul. 2023 – Aug. 2024

Advisor: Prof. Seon Joo Kim (CIPLAB, Yonsei University)

- Continual Learning for Video Action Recognition (CVPR'24 submitted)
- Object Centric Learning

Preprints

Where Did It Go Wrong? Process-Level Evaluation of Web Agents with Semantic State Tracking

Jiwan Chung, **JiHyuk Byun**, Vibhav Vineet, Seon Joo Kim

Under Review, 2026

Publications

Towards Preference-Aligned 3D Quality Assessment

Workshops on Image Processing and Image Understanding (IPIU), 2026 (Accept)

JiHyuk Byun, Seon Joo Kim

Continual Learning for Video Action Recognition

IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR), 2024 (Submitted)

MinJu Ki, **JiHyuk Byun**, Seon Joo Kim

A Comprehensive Study Integrating Instrument Separation and Transformer

Workshops on Image Processing and Image Understanding (IPIU), 2024

JiHyuk Byun*, Yunsu Park*, Seon Joo Kim (* indicates equal contribution)

Projects	Enhancing Text-to-3D Generation with PBR Materials Jul. – Dec. 2024 <i>Funded by Korea Deep Learning</i>
	<ul style="list-style-type: none"> • Reproduced baseline 3D generative models (DreamFusion, NeRF, 3DGS) • Preprocessed 11TB-scale Objaverse 3D dataset (mesh, multi-view rendering, PBR maps)
	Developing a Sustainable Collaborative Multi-modal Continual Learning Framework Jul. – Dec. 2023 <i>Funded by IITP (Institute for Information & Communication Technology Planning & Evaluation)</i>
	<ul style="list-style-type: none"> • Built video data pipeline (UCF101, HMDB51) and reproduced baseline continual learning models • Conducted Online Continual Learning survey with key algorithm reimplementation
	Synthetic Voice Detection May 2023 <i>Yonsei Artificial Intelligence (YAI)</i>
	<ul style="list-style-type: none"> • Proposed strategies to detect AI-generated voice; 3rd place at 2nd YAI-Con
Awards and Honors	Gwanjeong Academic Encouragement Scholarship May 2025 – Present
	<ul style="list-style-type: none"> • Total KRW 22M, top graduate students nationwide
	Sunhyun Scholarship Mar. 2025
	<ul style="list-style-type: none"> • Sunhyun Scholarship Foundation
	Highest Honors – Academic Excellence Award (Top 1%) Feb. 2022 Recognized for outstanding academic performance (highest GPA)
	High Honors – Academic Excellence Award (Top 3%) × 2 Sep. 2022, Feb. 2024
	<ul style="list-style-type: none"> • Yonsei University
Jinri (Academic Excellence) Scholarship Sep. 2022	
<ul style="list-style-type: none"> • Yonsei University 	
Sundeuk Scholarship Jan. 2023	
<ul style="list-style-type: none"> • Sundeuk Scholarship Foundation 	
Teaching Experience	AIC2120: Introduction to AI and Its Application Fall 2024, Fall 2025 Teaching Assistant, Yonsei University
Skills	Programming Languages
	<ul style="list-style-type: none"> • Python, C/C++, Java, Verilog
	Tools
	<ul style="list-style-type: none"> • Deep Learning Frameworks, Python Scientific Computing Libraries • 3D Vision Scientific Tools (Open3D, Trimesh, PyTorch3D, Blender) • Docker, Linux, Shell Scripts, SLURM, WandB, \LaTeX • Hardware Designing Tools (Pspice, Hspice, Design Vision)
	Languages
	<ul style="list-style-type: none"> • Korean (native), English (fluent)
References	Yonsei University
	<ul style="list-style-type: none"> • Prof. Seon Joo Kim, Professor, Yonsei University