

Minhyuk Seo

Contact Information

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Research Interests

Efficient Learning, Online Learning, Continual Learning, Collaborative Learning, Multimodal Learning, and Personalization

Education

Yonsei University, Seoul, Korea

M.S. in Computer Science

Mar 2023 - Aug 2024 (Early graduation)

Advisor: **Prof. Jonghyun Choi**

GPA: 4.3/4.3 (4.0/4.0)

B.S. in Computer Science

Mar 2017 - Feb 2023

Ranked **2nd** out of 92 students

GPA: 4.16/4.3 (3.94/4.0)

2 years of absence due to obligatory military service (2018 - 2019)

Research Experience

KU Leuven, Belgium

Mar 2025 - Present

Research Associate @ PSI Group

Advisor: **Prof. Tinne Tuytelaars**

Seoul National University, Korea

Sep 2024 - Feb 2025

Research Assistant @ Machine Perception and Reasoning Lab

Advisor: **Prof. Jonghyun Choi**

LG AI Research, Korea

Feb 2023 - Aug 2023

Research Intern @ Advanced Machine Learning Lab

Mentor: **Dr. Hankook Lee**

Yonsei University, Korea

Undergraduate Researcher @ Vision and Learning Lab

Feb 2022 - Jan 2023

Advisor: **Prof. Jonghyun Choi**

Undergraduate Researcher @ Mobile and Embedded System Lab

Feb 2021 - Jan 2022

Advisor: **Prof. Hojung Cha**

Preprints

🎓 **Google Scholar** (* Indicates equal contribution)

OASIS: Online Sample Selection for Continual Visual Instruction Tuning

Minjae Lee*, **Minhyuk Seo***, Tingyu Qu, Tinne Tuytelaars, Jonghyun Choi

ACL ARR under review (arXiv 2025.10)

Risk-adaptive Activation Steering for Safe Multimodal Large Language Models

Jonghyun Park, **Minhyuk Seo**, Jonghyun Choi

CVPR 2026 under review (arXiv 2025.10)

Publications

Not All Clients Are Equal: Collaborative Model Personalization on Heterogeneous Multi-Modal Clients

Minhyuk Seo*, Taeheon Kim*, Hankook Lee, Jonghyun Choi, Tinne Tuytelaars

Best Paper Award @ AAAI 2026 Workshop of PerFM

ICLR 2026

GenOL: Generating Diverse Examples for Name Only Online Learning

Minhyuk Seo, Seongwon Cho, Minjae Lee, Diganta Misra, Hyeonbeom Choi, Seon Joo Kim,

Jonghyun Choi
TMLR 2025

HEFT: Multi-modal Personalized Federated Learning for Heterogeneous Clients
Minhyuk Seo*, Taeheon Kim*, Hankook Lee, Jonghyun Choi, Tinne Tuytelaars
CVPRW 2025 @ Multimodal Foundation Models Workshop

Budgeted Online Continual Learning by Adaptive Layer Freezing and Frequency-based Sampling
Minhyuk Seo*, Hyunseo Koh*, Jonghyun Choi
ICLR 2025 (Spotlight)

Learning Equi-angular Representations for Online Continual Learning
Minhyuk Seo, Hyunseo Koh, Wonje Jeung, Minjae Lee, San Kim, Hankook Lee, Sungjun Cho, Sungik Choi, Hyunwoo Kim, Jonghyun Choi
CVPR 2024

Online Continual Learning for Interactive Instruction Following Agents
Byeonghwi Kim*, Minhyuk Seo*, Jonghyun Choi
ICLR 2024

Online Boundary-free Continual Learning by Scheduled Data Prior
Hyunseo Koh, Minhyuk Seo, Jihwan Bang, Hwanjun Song, Deokki Hong, Seulki Park, Jung-Woo Ha, Jonghyun Choi
ICLR 2023

Awards

Best Paper Award , PerFM Workshop (AAAI 2026)	Jan 2026
Travel Grant, CVPR 2025	June 2025
Travel Grant, ICLR 2025	Apr 2025
Silver Prize , Graduate School Outstanding Research Award, Yonsei University	July 2024
2nd Place Award , Continual Learning Challenge (CVPR 2024)	May 2024
Bronze Prize , Outstanding Paper Awards, IPIU 2024	Feb 2024
1st Place Award , Visual Continual Learning Challenge (ICCV 2023)	Oct 2023
Best Capstone Design Award , Dept. of Computer Science, Yonsei University	Dec 2022
Minister of Science and ICT Award , HANIUM ICT competition	Feb 2019
Multiple Honors & Scholarships from Yonsei University	2017 - 2023

Scholarships

Kwanjeong Education Foundation Scholarship (Graduate Students)	Mar 2023 - Aug 2024
• Full tuition or living expenses during graduate years (\$4,500 / semester)	
Yonsei Bachelor & Master Program Scholarship	Mar 2023 - Aug 2024
• One or two students are selected from each department each year	
• Full tuition during graduate studies (\$5,000 / semester)	
Kwanjeong Educational Foundation Scholarship (B.S. Students)	Mar 2021 - Feb 2023
• Full tuition or living expenses during undergraduate years (\$4,000 / semester)	
Sejong Human Resources & Education Development Foundation	July 2021 - Dec 2021
• Living expenses (\$1,500)	

Teaching Experience

Yonsei University, Seoul, Korea

- TA of Software Comprehensive Design (Spring 2023)
- TA of Software Comprehensive Design (Fall 2023)

Seoul National University, Seoul, Korea

- TA of Random Variables and Random Processes (Spring 2024)

Talks

Agentic Learning AI Lab @ NYU , Virtual	Dec 2025
• Human-like AI	

	<div>Princeton Visual AI Lab @ Princeton University, Virtual</div> <div><ul style="list-style-type: none">Toward Efficient Training of MLLMs</div> <div>Naver Labs, Seongnam, Korea</div> <div><ul style="list-style-type: none">Recent Research on Continual Learning</div> <div>Apple Research, Seattle, USA</div> <div><ul style="list-style-type: none">Practical Setups and Methods for Continual Learning</div> <div>July 2025</div>
Academic Services	<div>Reviewer</div> <div><ul style="list-style-type: none">Conferences: CVPR (2024-2026), ICML (2024-2026), ICLR (2024-2026), AISTATS (2025-2026), ICRA (2025), NeurIPS (2024-2025), ICCV (2025), ECCV (2026), ACL ARR (May 2025), WACV (2026), AAAI (2026), CoRL @ LLHomeRobots (2024)Journals: TPAMI (2024-2026), IJCV (2025-2026)</div> <div>Program committee member</div> <div><ul style="list-style-type: none">Challenge chair at ICCV 2025 @ Continual Learning and Computer Vision Workshop</div>
US Patents	<div>Method and apparatus with neural network model training</div> <div>Minhyuk Seo, Hyunseo Koh, Jonghyun Choi</div> <div>US 20250094809A1</div> <div>Mar 2025</div>
Skills	<div>Programming Languages</div> <div><ul style="list-style-type: none">Python, C/C++, Java</div> <div>Tools</div> <div><ul style="list-style-type: none">Deep Learning Frameworks (PyTorch, TensorFlow)Python Scientific Computing Libraries (numpy, scipy, matplotlib, etc.)Docker, Slurm</div> <div>Languages</div> <div><ul style="list-style-type: none">Korean(native), English(fluent)</div>
Military Service	<div>Republic of Korea Army 20th, Yangpyeong, Korea</div> <div>Mar 2018 - Nov 2019</div>
References	<div>Seoul National University</div> <div><ul style="list-style-type: none">Prof. Jonghyun Choi (Advisor) ✉</div> <div>Associate Professor</div> <div>KU Leuven</div> <div><ul style="list-style-type: none">Prof. Tinne Tuytelaars (Advisor) ✉</div> <div>Professor</div> <div>Sungkyunkwan University</div> <div><ul style="list-style-type: none">Prof. Hankook Lee (Collaborator & Mentor @ LG AI Research) ✉</div> <div>Assistant Professor</div> <div>Yonsei University</div> <div><ul style="list-style-type: none">Prof. Seon Joo Kim (Thesis Advisory Committee) ✉</div> <div>Professor</div>