Minhyuk Seo

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Master's Student in Vision and Learning Laboratory @ Yonsei University, South Korea
Areas of expertise: Continual Learning, Multi-Modal Learning

EDUCATION

MS in Computer Science, Yonsei University, Seoul, Korea   Mar 2023 — June 2024 (Expected)
    Advisor: Jonghyun Choi
    GPA: 4.3 / 4.3

BS in Computer Science, Yonsei University, Seoul, Korea   Mar 2017 — Feb 2023
    2 years of absence due to obligatory military service (2018 - 2020)
    GPA: 4.16 / 4.3 (Ranked **2nd** in Dept. of Computer Science)

Daejeon Dongsin Science High School, Dajeon, Korea   Mar 2014 — Feb 2017

RESEARCH

LG AI Research, Seoul, Korea   Feb 2023 — Aug 2023
Research Intern @ Advanced Machine Learnig Lab

- Mentor: Hankook Lee and Moontae Lee.

Yonsei University, Seoul, Yonsei University, Korea   Feb 2022 — Jan 2023
Research Undergraduate Intern @ Vision and Learning Lab

- Supervisor: Jonghyun Choi.

Yonsei University, Seoul, Yonsei University, Korea   Feb 2021 — Jan 2022
Research Undergraduate Intern @ Mobile and Embedded System Lab

- Supervisor: Hojung Cha.

PROJECTS

Federaeted Continual Learning, Yonsei Vision and Learning Lab   Apr 2024 — Present
- Research on Federated Continual Learning in Multi-modal Tasks

Continual Learning using Generative Models and Large Language Models, Yonsei Vision and Learning Lab   Sep 2023 — Mar 2023
- Research on name-only continual learning using Generative Models and Large Language Models
- Research on Continual Learning for Embodied Agents

Continual Learning in Text-to-video Retrieval, Yonsei Vision and Learning Lab   Sep 2023 — Dec 2023
- Research text-to-video retrieval task in incremental setup

Neural Collapse in Continual Learning, LG AI Research   Feb 2023 — Aug 2023
- Research Neural Collapse phenomenon in Online Continual Learning

Object Detection Continual Learning for Autonomous Driving,
SAIT (Samsung Advanced Institute of Technology)   Sep 2022 — Aug 2023
- Develop methods for object detection continual learning in Autonomous Driving

Continual Learning in Noisy Set-up, Vision and Learning Lab   Aug 2022 — Nob 2022
- Continual Learning in Noisy Set-up using pre-trained model.

Online continual learning in boundary-free setup, Vision and Learning Lab   Jan 2022 — Oct 2022
- Online continual learning in boundary-free setup using Scheduled Data Prior (submitted ICLR 2023)

Publications

1. **Minhyuk Seo***, Hyunseo Koh*, and Jonghyun Choi. A paper about continual learning with adaptive layer freezing. **Under Review**.

2. **Minhyuk Seo**, Diganta Misra, Seongwon Cho, Minjae Lee and Jonghyun Choi. Just Say the Name: Online Continual Learning with Category Names Only via Data Generation. **arXiv**.

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

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

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

(* Indicates equal contribution)

Awards & Honors

1st Place Award, ICCV 2023 Visual Continual Learning Challenge	Oct 2023
Best Capstone Design Award in Dept. of Computer Science, Yonsei University	Dec 2022
1st place in the HANIUM ICT competition, Minister of Science, ICT and Future Planning Award	Feb 2019
Multiple Honors & Scholarships from Yonsei University	2017 - 2023

Scholarships

2023	**Kwanjeong Educational Foundation Scholarship for Graduate Student** Full tuition and living expenses during undergraduate years - 6 million won / semester	Mar 2023 — Present
2023	**Yonsei Bachelor & Master Program Scholarship** (Select two students from the department each year) Full tuition during undergraduate years - 6.5 million won / semester	Mar 2023 — Present
2021	**Kwanjeong Educational Foundation Scholarship for Bachelor's program** Full tuition and living expenses during undergraduate years - 5.5 million won / semester	Mar 2021 — Feb 2023
2021	**Sejong Human resources and Lifelong Education Development Foundation** 2 million won	Jul 2021 — Dec 2021

Technical Skills

Advanced	Python, Java	3 years
Intermediate	C++, R	1 year
Basic	MATLAB, HTML, CSS, JS	6 months
Frameworks	PyTorch	2 years

Military Service

Repulic of Korea Army 20th, Yangpyeong, Korea	Mar 2018 - Nov 2019