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# Minhyuk Seo

Master's Student in Vision and Learning Laboratory @ Yonsei University, South Korea

**Areas of expertise:** Continual Learning, Multi-Modal Learning

## EDUCATION

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| <b>MS in Computer Science, Yonsei University</b> , Seoul, Korea<br>Advisor: Jonghyun Choi                                                                                                                   | Feb 2023 — Present  |
| <b>BS in Computer Science, Yonsei University</b> , Seoul, Korea<br>2 years of absence due to obligatory military service (2018 - 2020)<br>GPA: 4.16 / 4.3 (Ranked <b>2nd</b> in Dept. of Computer Science ) | Feb 2017 — Feb 2023 |
| <b>Daejeon Dongsin Science High School</b> , Dajeon, Korea                                                                                                                                                  | Mar 2014 — Feb 2017 |

## RESEARCH

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| <b>LG AI Research</b> , Seoul, Korea<br>Research Intern @ Advanced Machine Learnig Lab<br>• Mentor: Hankook Lee and Moontae Lee.                          | Feb 2023 — Aug 2023 |
| <b>Yonsei University</b> , Seoul, Yonsei University, Korea<br>Research Undergraduate Intern @ Vision and Learning Lab<br>• Supervisor: Jonghyun Choi.     | Feb 2023 — Aug 2023 |
| <b>Yonsei University</b> , Seoul, Yonsei University, Korea<br>Research Undergraduate Intern @ Mobile and Embedded System Lab<br>• Supervisor: Hojung Cha. | Feb 2022 — Feb 2023 |

## PROJECTS

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| <b>Continual Learning in Text-to-video Retrieval</b> , Yonsei Vision and Learning Lab<br>• Research text-to-video retrieval task in incremental setup                                                     | Sep 2023 — Dec 2024 |
| <b>Neural Collapse in Continual Learning</b> , LG AI Research<br>• Research Neural Collapse phenomenon in Online Continual Learning                                                                       | Feb 2023 — Aug 2023 |
| <b>Object Detection Continual Learning for Autonomous Driving</b> ,<br>SAIT (Samsung Advanced Institute of Technology)<br>• Develop methods for object detection continual learning in Autonomous Driving | Sep 2022 — Aug 2023 |
| <b>Continual Learning in Noisy Set-up</b> , Vision and Learning Lab<br>• Continual Learning in Noisy Set-up using pre-trained model.                                                                      | Aug 2022 — Nob 2022 |
| <b>Online continual learning in boundary-free setup</b> , Vision and Learning Lab<br>• Online continual learning in boundary-free setup using Scheduled Data Prior (submitted ICLR 2023)                  | Jan 2022 — Oct 2022 |

## PUBLICATIONS

- Minhyuk Seo\***, Hyunseo Koh\*, and Jonghyun Choi. A paper about continual learning with adaptive layer freezing. **Under Review**.
- 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**.
- 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**.
- Byeonghwi Kim\*, **Minhyuk Seo\*** and Jonghyun Choi. Online Continual Learning for Interactive Instruction Following Agents. **ICLR 2024**.
- 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

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| 1st Place Award, ICCV 2023 Visual Continual Learning Challenge Track B                      | 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

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

## TECHNICAL SKILLS

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

## MILITARY SERVICE

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|------------------------------------------------------------|---------------------|
| Repulic of Korea Army 20 <sup>th</sup> , Yangpyeong, Korea | Mar 2018 - Nov 2019 |
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