

Ahyun Seo

Computer Vision Researcher
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EDUCATION	Pohang University of Science and Technology, Pohang, South Korea Mar. 2018 - Feb. 2025 • Ph.D. in Computer Science and Engineering (advisor : Minsu Cho) • Dissertation : <i>Symmetry Detection via Equivariant Representations and Geometric Priors</i> • Committee : Minwoo Park, Tae-Hyun Oh, Won Hwa Kim, Suha Kwak, and Minsu Cho Pohang University of Science and Technology, Pohang, South Korea Mar. 2012 - Feb. 2018 • B.S. in Mechanical Engineering
EXPERIENCE	NVIDIA, Remote Feb. 2023 - Nov. 2023 • Machine Learning Engineer Intern, Autonomous Vehicles Perception Team • Collaborated closely with mentors: Taeun Choe and Jungseock Joo. • Generated synthetic data using DRIVE SIM to support autonomous vehicle (AV) perception. • Developed a multi-camera 3D viewpoint adaptation model for bird's-eye view segmentation. • Evaluated the robustness of 3D perception models across diverse camera configurations.
PUBLICATIONS	[1] Ahyun Seo, Minsu Cho. Leveraging 3D Geometric Priors in 2D Rotation Symmetry Detection. Accepted to <i>Proceedings of the IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR)</i>, 2025 [2] Ahyun Seo, Byungjin Kim, Suha Kwak, and Minsu Cho. Reflection and Rotation Symmetry Detection via Equivariant Learning. In <i>Proceedings of the IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR)</i>, 2022. [3] Ahyun Seo*, Woohyeon Shim*, and Minsu Cho. Learning to Discover Reflection Symmetry via Polar Matching Convolution. In <i>Proceedings of the IEEE/CVF International Conference on Computer Vision (ICCV)</i>, 2021. (*equal contributions)
PROJECTS	[4] Won-gyun Yu, Ahyun Seo, Minsu Cho. Instance-level Reflectional and Rotational Symmetry Detection. <i>under review</i>, 2025
PATENTS	[5] Ahyun Seo, Tae Eun Choe, Minwoo Park, Jung Seock Joo. Viewpoint-Adaptive Perception for Autonomous Machines and Applications Using Simulated Sensor Data. <i>U.S. Patent Application No. 18/680,454.</i>, 2024 [6] Ahyun Seo, Minsu Cho, Suha Kwak, Byungjin Kim. Method and Apparatus with Symmetry Detection. <i>U.S. Patent Application No. 18/342,236.</i>, 2023
AWARDS	Silver Prize, 37th Workshop on Image Processing and Image Understanding (South Korea) 2025 Finalist, Qualcomm Innovation Fellowship (South Korea) 2022 Finalist, Qualcomm Innovation Fellowship (South Korea) 2021
TEACHING ASSISTANT	Hyundai Steel, AI training course May. 2021 SK Hynix, ML Champion course Aug. 2020 Samsung Electronics, Artificial intelligence capabilities training course Aug. 2018 POSCO, AI expert training course Jun. 2018 - Jul. 2018
ACADEMIC SERVICES	Reviewer • CVPR 2023/2024/2025, ICCV 2023/2025, AAAI 2025, WACV 2025, ECCV 2024, ACCV 2024