

Byeongju Woo

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Education

University of Michigan	Starting Fall 2026
Ph.D. in Computer Science and Engineering (advisor: Prof. Stella Yu)	Ann Arbor, MI, USA
<i>Incoming Ph.D. Student</i>	
Pohang University of Science and Technology (POSTECH)	Mar 2019 – Feb 2023
B.S. in Computer Science and Engineering	Pohang, South Korea
<i>Summa Cum Laude</i>	

Publications

- Aligning Forest and Trees in Images and Long Captions for Visually Grounded Understanding**
Byeongju Woo, Zilin Wang, Byeonghyun Pak, Sangwoo Mo, Stella Yu
Under Review
- Textual Query-Driven Mask Transformer for Domain Generalized Segmentation**
Byeongju Woo*, Byeonghyun Pak*, Sunghwan Kim*, Dae-hwan Kim, Hoseong Kim
ECCV 2024
- Human Pose Estimation in Extremely Low-Light Conditions**
Sohyun Lee*, Jaesung Rim*, Boseung Jeong, Geonu Kim, Byeongju Woo, Haechan Lee, Sunghyun Cho, Suha Kwak
CVPR 2023

Research Experience

Independent Research <i>Remote Collaboration with University of Michigan (advisor: Prof. Stella Yu)</i>	Jan 2025 – Present Daejeon, South Korea
Machine Learning Lab @ POSTECH <i>Undergraduate Research Intern (advisor: Prof. Sungsoo Ahn)</i>	Aug 2022 – Dec 2022 Pohang, South Korea
<ul style="list-style-type: none">• Researched language-grounded visual understanding• 1 paper under review	
Computer Vision Lab @ POSTECH <i>Undergraduate Research Intern (advisor: Prof. Suha Kwak)</i>	Dec 2021 – May 2022 Pohang, South Korea
<ul style="list-style-type: none">• Researched robust human pose estimation under adverse condition (e.g., extremely low-light)• 1 Publication in CVPR 2023 [project page]	

Industry Experience

Agency for Defense Development <i>Research Officer for National Defense (ROND)</i>	Mar 2023 – Present Daejeon, South Korea
<ul style="list-style-type: none">• Researched Domain Generalized Object Detection for UAV detection• 1 Publication in ECCV 2024 [project page]	

SK Hynix <i>Computer Vision Research Intern</i>	Jun 2021 – Jul 2021 Icheon, South Korea
• Developed an automated algorithm to pre-check for rejects in 3D NAND manufacturing with DL models	

Teaching Experience

POSTECH AIGS102: Introduction to Artificial Intelligence II	Sep 2022 – Dec 2022
• Teaching Assistant for Prof. Eunyoung Youn, managed course assignments	
POSTECH AIGS101: Introduction to Artificial Intelligence I	Mar 2022 – Jun 2022
• Teaching Assistant for Prof. Eunyoung Youn, weekly lab sessions and grading	

Honor, Awards and Scholarship

Director's Award, Agency for Defense Development	Dec 2022
• Second place, national defense research projects (miliTECH Challenge)	
• <i>Topic: Autonomous mobile robot with friend-or-foe identification</i>	
Excellence Research Award, POSTECH	Jun 2022
• Second place, undergraduate CSE research project	
• <i>Topic: Human pose estimation in extremely low-light conditions</i>	
Minister's Award, Ministry of Science and ICT	Dec 2021
• First place, national defense research projects (miliTECH Challenge)	
• <i>Topic: Designing adversarial patches to protect friendly forces from deep-learning detectors</i>	
SK Hynix Industry-Academia Scholarship	Sep 2021 – Feb 2023
• Stipend scholarship for outstanding performance in industry-academia research	
Korea National Scholarship of Excellence in Science and Technology	Mar 2021 – Feb 2023
• Full-ride scholarship for selected research officers in defense science and technology	
Jigok Tuition Scholarship, POSTECH	Mar 2019 – Feb 2021
• Full-ride merit-based scholarship for academic excellence	

Skills

Programming Languages: Python, C/C++, Java, R, SQL

Frameworks & Tools: PyTorch, TensorFlow, NumPy, OpenCV, Pandas, Docker, Git

Certificate: Engineer Big Data Analysis (acquired Oct. 2023)