Donghyeon Kwon

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Research Objective

My work addresses the diverse challenges of modern computer vision tasks by leveraging data-efficient learning. I have focused on, and will continue to explore, this approach to foster efficient and effective AI learning while minimizing labeling costs. Specifically, my research experience includes:

- Self-supervised learning of semantic correspondence using a vast amount of web videos.
- Semi-supervised learning for semantic segmentation and video action detection.
- Multi-modal knowledge distillation for camera-only 3D object detection.

Education

POSTECH Feb. 2021 – Present

Integrated M.S. and Ph.D. in Computer Science and Engineering;

- Supervised by Prof. Suha Kwak in the Computer Vision Lab.
- Research interest: Computer vision, data-efficient learning, self-supervised learning, knowledge distillation

POSTECH Feb. 2017 – Feb. 2021

B.S. in Computer Science and Engineering

Publications

[1] **Decoupled Finetuning for Domain Generalizable Semantic Segmentation** Apr. 2025
Jaehyun Pahk, **Donghyeon Kwon**, Seong Joon Oh and Suha Kwak
The Thirteenth International Conference on Learning Representations (ICLR)

[2] **Boosting Semi-supervised Video Action Detection with Temporal Context** Feb. 2025
Donghyeon Kwon, Inho Kim and Suha Kwak
IEEE/CVF Winter Conference on Applications of Computer Vision (WACV), **Oral Presentation**

[3] **Self-supervised Learning of Semantic Correspondence Using Web Videos** Jan. 2024
Donghyeon Kwon, Minsu Cho and Suha Kwak
IEEE/CVF Winter Conference on Applications of Computer Vision (WACV)

[4] **Leveraging Proxy of Training Data for Test-Time Adaptation** July. 2023
Juwon Kang, Nayeong Kim, **Donghyeon kwon**, Jungseul Ok and Suha Kwak
International Conference on Machine Learning (ICML)

[5] **Semi-supervised Semantic Segmentation with Error Localization Network** June 2022
Donghyeon kwon, and Suha Kwak
IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR)

Experience

Research Intern, **Samsung Advanced Institute of Technology** July 2023 – Aug. 2023

- Mentor: Dr. **Hyeongseok Son**
- Conducted research on data-efficient 3D object detection for autonomous driving

Research Assistant, **Korea Institute of Science and Technology** June 2019 – Aug. 2019

- Advisor: Dr. **Suhyun Kim**
- Conducted research on AI-powered typo correction for virtual keyboards

Professional Services

Reviewer, IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR): 2023-2025
Reviewer, IEEE/CVF International Conference on Computer Vision (ICCV): 2023, 2025
Reviewer, European Conference on Computer Vision (ECCV): 2024
Reviewer, Conference on Neural Information Processing Systems (NeurIPS): 2023
Reviewer, International Conference on Learning Representations (ICLR): 2024-2025

Awards & Achievements

BK21 Best Paper Award, POSTECH CSE, 2023
- Semi-supervised Semantic Segmentation with Error Localization Network (CVPR 2022)

Jigok Scholarship, POSTECH, 2017-2020