

DAHYE KIM

School of Electrical and Electronic Engineering, Yonsei University, Seoul, Republic of Korea

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RESEARCH INTERESTS

- Computer Vision: Video Understanding, Vision-Language Understanding, Anomaly Detection
- Machine Learning: Open-set/OOD Learning, Learning with Limited Labeled Data

EDUCATION

Yonsei University, Seoul, Republic of Korea

Sep. 2022 - Aug. 2024 (Expected)

M.S. Candidate of Electrical & Electronic Engineering

- Advisor : Prof. Kwanghoon Sohn
- Cumulative GPA: 3.9/4.0

Yonsei University, Seoul, Republic of Korea

Mar. 2020 - Aug. 2022

B.S. of Electrical & Electronic Engineering

- Cumulative GPA: 4.0/4.0 (class rank: 2/224)

Hongik University, Seoul, Republic of Korea

Mar. 2018 - Feb. 2020

Electronic & Electrical Engineering

- Cumulative GPA: 3.77/4.0

HONORS AND SCHOLARSHIPS

Honors

- High Honors Student (Top 3% of department) *2020 Fall, 2021 Spring, 2021 Fall*
- Honors Student (Top 10% of department) *2020 Spring*

Scholarships

- Brain Korea 21 (BK21) Scholarship, National Research Foundation of Korea *Sep. 2022 - Present*
- Automotive System IC Scholarship,
Automotive System IC Fusion Human Resource Research Center *Sep. 2022 - Present*
- Teaching Assistant Scholarship, Yonsei University *2022 Fall, 2023 Fall*
- Graduate Student Research Assistant Scholarship, Yonsei University *2022 Fall*
 - Outstanding Incoming Student (\$ 3,500)
- Academic Excellence Scholarship, Yonsei University *2021 Spring, 2021 Fall*
 - Merit-based Scholarship (\$ 3,600 total)
- National Science and Technology Scholarship, Korea Student Aid Foundation *2020 Fall*
 - Full Scholarship (\$ 3,600)
- Academic Excellence Scholarship, Hongik University *2018 Fall, 2019 Spring, 2019 Fall*
 - Merit-based Scholarship (\$ 6,300 total)

TEACHING EXPERIENCES

- Signals and Systems *2022 Fall*
- Introductory Digital Labs *2023 Fall*

WORKING PAPERS

1. **Dahye Kim**, Jungin Park, and Kwanghoon Sohn (2024), “Towards Realistic Video Grounding via Hierarchical Temporal Token Merging”, *In Progress*

PUBLICATIONS

1. **Dahye Kim**, Jungin Park, Jiyoung Lee, Seongheon Park, and Kwanghoon Sohn (2023), “Language-free Training for Zero-shot Video Grounding”, *IEEE/CVF Winter Conference on Applications of Computer Vision (WACV)*
2. Seongheon Park, Hanjae Kim, Minsu Kim, **Dahye Kim**, and Kwanghoon Sohn (2023), “Normality Guided Multiple Instance Learning for Weakly Supervised Video Anomaly Detection”, *IEEE/CVF Winter Conference on Applications of Computer Vision (WACV)*

WORK AND RESEARCH EXPERIENCES

Research Assistant, Digital Image Media Lab., Yonsei University *Sep. 2022 - Present*

- Multi-modal Learning with Visual and Textual Representation
- Learning with Limited Labeled Data (Weakly-Supervised, Semi-Supervised, Zero-Shot Learning)
- Anomaly Detection and Open-Set Recognition for Computer Vision

Undergraduate Research Assistant, Digital Image Media Lab., Yonsei University *Jan. 2021 - Aug. 2022*

- Human-object Interaction (HOI) Detection
- Vision-Language Understanding
- Video Understanding

PROJECTS

1. **Korea Institute of Science and Technology (KIST)** *Sep. 2022 - Aug. 2023*

- Project Title: Deep Identification and Tracking of Missing Person in Heterogeneous CCTV
- Covers: Object Detection, Object Tracking, Person Re-Identification, Anomaly Detection

2. **Ministry of Science and ICT, Mid-Level Research** *Sep. 2022 - Aug. 2023*

- Project Title: Development of Complex Situational Awareness and Prediction Technology through Multi-Modal Data Fusion and Social Artificial Intelligence
- Covers: Multi-modal Learning, Video Understanding

3. **Yonsei University-Yonsei Signature Research Cluster** *Sep. 2022 - Present*

- Project Title: Development of Multimodal-based General-purpose Social Artificial Intelligence Technology
- Covers: Multi-Modal Learning, Zero-Shot Learning, Meta-Learning

SELECTED COURSEWORK

Artificial Intelligence : Introduction Artificial Intelligence, Intelligent Control, Multimodal Deep Learning, Neural Network, Medical Imaging System and its Application for Artificial Intelligence, Topics in Computer Vision, and Special Topics for Deep Learning.

Mathematics : Linear Algebra, Mathematical Statistics, Probability and Random Variables, Random Process, Optimization Theory, Information Theory.

Programming : Data Structure and Algorithms, Digital Image Processing, Operating Systems.

PATENTS

- Korean Patent No. 10-2023-0054355 (Video Moment Retrieval)

OTHER SKILLS

Language and Tools : Python, MATLAB, C/C++, Linux Shell, LaTeX.

Libraries : Pytorch, TensorFlow, Keras, Scikit-Learn, Numpy, Jupyter, etc.

REFERENCES

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