Jeonghyeon Kim

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RESEARCH INTEREST

Out-of-Distribution Detection, Machine Unlearning and Representation Learning

PROFESSIONAL EXPERIENCE

DAINTLAB, SeoulTech   Seoul, South Korea
Research Assistant (Advisor: Prof. Sangheum Hwang)   Mar. 2023 - present
Research topic: Towards Safe and Reliable Artificial Intelligence
Research Internship (Advisor: Prof. Sangheum Hwang)   Aug. 2022 - Feb. 2023
Research topic: Out-of-Distribution Detection through Vision-Language Models

Korea Institute of Science and Technkology Information, KISTI   Daejeon, South Korea
Research intern (Advisor: Dr. Ryong Lee)   Jul 2021 - Aug 2021
Reserach topic: De-identification of personal information in automotive driving image data

EDUCATION

Seoul National University of Science and Technology (SeoulTech)   Seoul, South Korea
Ph.D. Candidate in Data Science (Advisor: Prof. Sangheum Hwang)   Mar. 2023 - present
Seoul National University of Science and Technology (SeoulTech)   Seoul, South Korea
B.S. in Industrial and Information Systems Engineering   Mar. 2016 - Feb. 2022
B.S. in Electrical and Information Engineering (double major)   Mar. 2018 - Feb. 2022

PUBLICATIONS

International Conference
[C3] *"Enhanced OoD Detection through Cross-Modal Alignment of Multi-Modal Representations"*
Jeonghyeon Kim and Sangheum Hwang
Conference on Computer Vision and Pattern Recognition (**CVPR**) 2025
[C2] *"Comparison of Out-of-Distribution detection Performance of CLIP-based Fine-Tuning Methods"*
Jeonghyeon Kim, Jihyo Kim, and Sangheum Hwang
International Conference on Electronics, Information, and Communication (**ICEIC**) 2024 (Oral, Best Paper Award)
[C1] *"Comparison of Out-of-Distribution detection Performance of CLIP-based Fine-Tuning Methods"*
Jihyo Kim, **Jeonghyeon Kim**, and Sangheum Hwang
Workshop on Practical Deep Learning in the Wild at AAAI 2023

Domestic Conference
[C3] *"Uncovering Hidden Vulnerabilities in Machine Unlearning: Adversarial Attack as a Probe and Pruning as a Solution"*
Hwiyeong Lee, **Jeonghyeon Kim**, and Sangheum Hwang
Korea Computer Congress (**KCC**) 2024
[C2] *"Uniformity Reduction Regularization: Multimodal Fine-tuning to Enhance Out-of-Distribution Detection Performance"*
Jeonghyeon Kim and Sangheum Hwang

Korea Computer Congress (**KCC**) 2024 (Oral)

[**C1**] *"Enhancing Out-of-Distribution Detection Performance of CLIP Based on Fine-tuning with Random Texts"*
Jeonghyeon Kim, Jihyo Kim, and Sangheum Hwang
Korea Computer Congress (**KCC**) 2023 (Oral, Best Paper Award)

Awards and Achievements

Best Paper Award, ICEIC 2024	*Jan. 2024*
Best Paper Award, KCC 2023	*Jun. 2023*
Gold Prize, IISE BEAR program Capstone Competition	*2021*
Academic Excellence Scholarship	*Spring 2021*
Academic Excellence Scholarship	*Fall 2017*
Academic Excellence Scholarship	*Spring 2017*
Academic Excellence Scholarship	*Fall 2016*

Teaching Experience

Deep Learning (113044-41001)   IISE department in SeoulTech, Seoul
Teaching Assistant (Advisor: Prof. Sangheum Hwang)   *Fall Semester, 2023*
Artificial Intelligence (146048-41001)   IISE department in SeoulTech, Seoul
Teaching Assistant (Advisor: Prof. Sangheum Hwang)   *Spring Semester, 2023*

Other Experience

FC SeoulTech, Ctrl, Energizer, Maestro (Football Clubs)	*Mar. 2016 - present*
Republic of Korea Army	*Sep. 2018 - Apr. 2020*