

# Yeonguk Yu

PhD candidate  
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## EDUCATION

Mar. 2022 ~ Present	<b>Gwangju Institute of Science and Technology</b> School of Integrated Technology <i>Advisor: Kyoobin Lee</i> <i>Ph.D. Student</i> GPA: 4.0 / 4.5	Gwangju, Korea
Mar. 2020 ~ Feb. 2022	<b>Gwangju Institute of Science and Technology</b> School of Integrated Technology  Thesis: Self-Calibration for Detecting Out-of-Distribution in High-Fidelity Image Applications <i>Advisor: Kyoobin Lee</i> <i>M.S. in Integrated Technology</i> GPA: 3.94 / 4.5	Gwangju, Korea
Mar. 2015 ~ Feb. 2020	<b>Hanbat National University</b> Department of Computer Engineering  Thesis: Comparison and Analysis of the Attention Mechanism for Stock Prediction <i>Advisor: Yoon-Joong Kim</i> <i>B.S. in Computer Engineering</i> GPA: 4.19 / 4.5	Daejeon, Korea

## RESEARCH INTERESTS

- Learning with label noise
- Out-of-distribution detection
- Domain adaptation

## PUBLICATIONS (SCIE/ESCI)

1. Seongju Lee, Yeonguk Yu, Seunghyeok Back, Hogeon Seo, Kyoobin Lee, "Sleepyco: Automatic sleep scoring with feature pyramid and contrastive learning", *EXPERT SYSTEMS WITH APPLICATIONS*, (2024)
2. Yeonguk Yu, Sungho Shin, Minhwan Ko, Kyoobin Lee, "Exploring using jigsaw puzzles for out-of-distribution detection", *COMPUTER VISION AND IMAGE UNDERSTANDING*, (2024)

3. Seunghyeok Back, Seongju Lee, Sungho Shin, Yeonguk Yu, Taekyeong Yuk, Saepomi Jong, Seungjun Ryu, Kyoobin Lee, "Robust skin disease classification by distilling deep neural network ensemble for the mobile diagnosis of Herpes zoster", *IEEE ACCESS*, (2021)
4. Sungho Shin, Jongwon Kim, Yeonguk Yu, Seongju Lee, Kyoobin Lee, "Self-Supervised Transfer Learning from Natural Images for Sound Classification", *APPLIED SCIENCES*, (2021)
5. Yeonguk Yu, Yoon-Joong Kim, "Attention-LSTM-attention model for speech emotion recognition and analysis of IEMOCAP database", *ELECTRONICS*, (2020)
6. Yeonguk Yu, Yoon-Joong Kim, "Two-dimensional attention-based LSTM model for stock index prediction", *JOURNAL OF INFORMATION PROCESSING SYSTEM*, (2019)

## CONFERENCES

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1. Yeonguk Yu, Sungho Shin, Seunghyeok Back, Minhwan Ko, Sangjun Noh, Kyoobin Lee, "Domain-Specific Block Selection and Paired-View Pseudo-Labeling for Online Test-Time Adaptation", IEEE / CVF Computer Vision and Pattern Recognition Conference (CVPR), Seattle, United States (Jun. 2024) - Poster
2. Yeonguk Yu, Sungho Shin, Seongju Lee, Changhyun Jun, Kyoobin Lee, "Block Selection Method for Using Feature Norm in Out-of-distribution Detection", IEEE / CVF Computer Vision and Pattern Recognition Conference (CVPR), Vancouver, Canada (Jun. 2023) - Poster
3. Sungho Shin, Joosoon Lee, Junseok Lee, Yeonguk Yu, Kyoobin Lee, "Teaching where to look: Attention similarity knowledge distillation for low resolution face recognition", European Conference on Computer Vision, Tel aviv, Israel (Oct. 2022) - Poster
4. Yeonguk Yu, Yoon-Joong Kim, "A Voice Activity Detection Model Composed of Bidirectional LSTM and Attention Mechanism", International Conference on Humanoid, Nanotechnology, Information Technology, Communication and Control, Environment and Management, Baguio City, Philippines (Mar. 2019) - Conference paper

## PATENTS

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1. 유연국, 신성호, 이규빈, "합성곱 신경망의 특징 맵에 기반한 분포 외 탐지 시스템 및 방법", KR-Application No. 2023-0007306
2. 이규빈, 김종원, 신성호, 유연국, 이주순, 노상준, "OOD 객체 탐지 방법 및 시스템 (OUT-OF-DISTRIBUTION OBJECT DETECTION METHOD AND SYSTEM)", KR-Registration No. 10-2567558-0000

## AWARDS AND HONORS

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- GIST Presidential Fellowship, Gwangju Institute of Science and Technology (GIST), Korea (Mar. 2022)
- 제 1회 NIA-GIST AI-HUB 인공지능 경진대회, National Information Society Agency (NIA), Korea (Sep. 2022)

## PROJECTS

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- Development of Uncertainty-Aware Agents Learning by Asking Questions, Electronics and telecommunications research institute (ETRI), Korea / Development of algorithm for learning with label noise, model calibration (Apr. 2022 ~ Present)
- Development of test-time domain adaptation method for mobile robot in adverse weather conditions (LG Electronics), Gwangju Institute of Science and Technology, Korea / Development of online domain adaptation method (Sep. 2023 ~ Dec. 2023)

- Development of cloud robot intelligence augmentation, sharing and framework technology to integrate and enhance the intelligence of multiple robots, LG electronics, Korea / Development of algorithm for out-of-distribution detection using deep learning models (Apr. 2020 ~ Dec. 2023)

## **SKILLS AND TECHNIQUES**

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Fluent in Python (Pytorch)

Experienced in C, C++, C#