HOJIN YOO

Dreese Laboratories, 2015 Neil Avenue ◇ Columbus, OH 43212, USA

yoo.515@osu.edu ◇ https://hojinyoo.info

EDUCATION

The Ohio State University   Expected in Spring 2025
Transition to Ph.D. in Computer Science and Engineering

The Ohio State University   Aug. 2023 - Present
M.S. in Computer Science and Engineering

Incheon National University   Mar. 2021 - Feb. 2023
M.E. in Embedded-Systems Engineering

· Thesis: Domain Adaptation on Point Clouds using Voting-based Pseudo Labels and Cutting Plane Prediction
· Advisor: Kyungkoo Jun

Incheon National University   Mar. 2015 - Feb. 2021
B.E. in Embedded-Systems Engineering

RESEACH EXPERIENCE

Graduate Research Associate   Jan. 2024 - Present
Interactive Data Systems Labs, The Ohio State University

· Towards a Foundation Model for Mobility: Data Infrastructure Building Blocks
· Collaborate with 99P Labs, Honda

Graduate Research Assistant   Mar. 2021 - Feb. 2023
Machine Learning Applied Labs, Incheon National University

· Studied unsupervised domain adaptation method on point cloud classification.
· Developed semantic segmentation deep model utilized in intra-oral scanner.
· Researched data augmentation for image-based parking space classification deep model.

Undergraduate Research Assistant   Jan. 2019 - Feb. 2021
Machine Learning Applied Labs, Incheon National University

· Trained and evaluated object detection model to recognize penguin populations.
· Trained and evaluated object detection model for license plate recognition system.

WORK EXPERIENCE

Internship   Jun. 2019 - Aug. 2019
ChoisTechnology Co.   *Incheon, Republic of Korea*

· Developed an Android application for ThermoSafer, a healthcare device.

Military Service   Jan. 2016 - Oct. 2017
Republic of Korea ARMY   *Republic of Korea*

RESEARCH INTEREST

Multimodal Data Management, Human-computer Interaction, Computer Vision, and Machine Learning

PUBLICATION

Hojin Yoo, and Arnab Nandi. (Submitted). "Emojis in Autocompletion: Enhancing Video Search with Visual Query Suggestions."

Hojin Yoo, and Arnab Nandi. 2024. "Guided Querying over Videos using Autocompletion Suggestions." *Proceedings of the 2024 Workshop on Human-In-the-Loop Data Analytics*. 1-7. https://doi.org/10.1145/3665939.3665964

Hojin Yoo, Hangjae Cho, Jaegon Kim, and Kyungkoo Jun. 2023. "Real-time Deep Model for Intraoral Scanner Image Segmentation." *Journal of KICS*, Vol.48, No.10. https://doi.org/10.78-40/kics.2023.48.10.1

Hojin Yoo, and Kyungkoo Jun. 2023. "Point Cloud Classification by Domain Adaptation Using Recycling Max Pooling and Cutting Plane Identification." *Sensors* 23, no. 3: 1177. https://doi.org/10.3390/s23031177

Hojin Yoo, and Kyungkoo Jun. 2022. "Data Augmentation for Image based Parking Space Classification Deep Model." *Journal of KIISE*, Vol.49, No. 2, pp. 126-136. https://doi.org/10.5626/JOK.2022.49.2.126

Hojin Yoo, and Kyungkoo Jun. 2021. "Deep corner prediction to rectify tilted license plate images." *Multimedia Systems* 27, 779–786. https://doi.org/10.1007/s00530-020-00655-8

Hojin Yoo, and Kyungkoo Jun. 2020. "Deep Homography for License Plate Detection." *Information* 11, no. 4: 221. https://doi.org/10.3390/info11040221

PROFESSIONAL EXPERIENCE

Buckeye AutoDrive Team (perception)   Aug. 2023 - Jun. 2024
The Ohio State University

· Designed an algorithm for real-time speed limit sign recognition.
· Advisor: Wei-Lun Chao

Teaching Assistant, C Language Programming   Mar. 2021 - Jun. 2021
Incheon National University

· Managed office hours and developed exercises to reinforce student understanding.

Teaching Assistant, Image Big Data Basics and Applications   Winter 2020
Incheon National University

· Provided individualized support to students facing challenges during practical sessions.

Teaching Assistant, Data Utilization AI Practical Training (Track 3)   Summer 2019
Incheon National University

· Developed instructional materials and provided support to students during practice sessions.

AWARDS AND HONORS

· Excellence prize in Industry-University Project Challenge, Ministry of Trade, Industry and Energy, 2022.
· Top prize in AI X-Corps Contest, Incheon National University, 2022
· Excellence prize in 2021 INU X-Corps Demo Day, Incheon National University, 2021
· Graduate Student Scholarship, Incheon National University, 2021 -2022
· Ranked 2nd in the Dept. of Embedded-Systems Engineering, BS program, Incheon National University (2/30).
· Top prize in X-Corps Challenge Contest (XCC), Incheon National University, 2019
· Other scholarships for outstanding academic performance: Incheon National University, 2018 - 2020.

TECHNICAL SKILLS

- Programming languages: C, C++, Python, Java, Kotlin, MATLAB
- Machine Learning libraries: PyTorch, LibTorch
- Others: Linux (Ubuntu), Window OS, Raspberry Pi, Arduino