30, Pildong-ro 1-gil Jung-gu Seoul, Republic of Korea johs@dgu.ac.kr Github Google Scholar

Jo Hyenogseob

BIO

I am currently a master's student in the Department of Computer Science and Engineering at Dongguk University. I am a member of the Smart Vision & Media (SVM) Lab, focusing on computer vision and deep learning. My research focuses on defect classification and anomaly detection for industrial applications, aiming to solve real-world problems in automated manufacturing environments.

FIELD OF INTEREST

Computer vision, Representation learning, Defect classification, Anomaly detection

EDUCATION

Dongguk University (DGU)

Expected Feb. 2026

M.S. in Computer Science and Engineering (CSE)

Dongguk University (DGU)

Feb. 2024

B.S.E. in Mechanical Engineering (ME)

Gyeongkuk National University (GKNU)

Feb. 2020

B.A. in Ethics Education, Double Major English Education

RESEARCH EXPERIENCE

Multi-Illumination Display Inspection

Mar. 2024 - Feb. 2025

Graduate Student Research Assistant

LGDisplay

- · Developed a defect classification algorithm for display panels using multi-illumination image inputs.
- · Conducted in collaboration with LG Display as part of an industry-academia joint research project.
- · Achieved 98.5% classification accuracy on defect test images and deployed the algorithm within LG Display's production inspection system.

POSITIONS

Graduate Student Research Assistant (RA)

Mar. 2024 - Present

Smart Vision & Media (SVM) Lab

Computer Science and Engineering (CSE), Dongguk University (DGU)

Contract Teacher

Mar. 2020 - Dec. 2020

Social Studies, Ethics Youngju Girls' High School

PROJECT

LG Aimers
Winter 2023

AI Competition Project: B2B Sales Opportunity Prediction

LG AI Research

- · Developed a binary classification model to predict B2B sales opportunities from Marketing Qualified Lead (MQL) data.
- · Explored and compared over 10 machine learning models including XGBoost, LightGBM, and ensemble methods using customer data.

Autonomous Robot Navigation

Spring 2023

Course Project (MEC4092-01)

Dongguk University

- · Implemented autonomous navigation behaviors using ROS2 and the TurtleBot3 platform.
- · Developed and tested real-time control and sensor fusion nodes using Python.
- · Evaluated navigation performance in a physical testbed environment with obstacle avoidance tasks.

PUBLICATIONS

International Conferences

- 1. <u>Hyeongseob Jo</u>, Seunggi Park, and Sung In Cho. A survey of unsupervised learning-based out-of-distribution detection. In *Proceedings of the IEEE International Conference on Consumer Electronics-Asia (ICCE-Asia)*, pages 1–4. IEEE, 2024
- 2. Yoonseo Park, <u>Hyeongseob Jo</u>, and Sung In Cho. A survey of training-free diffusion-based image generation with free-form mask. In *Proceedings of the 2025 International Technical Conference on Circuits/Systems, Computers and Communications (ITC-CSCC)*, 2025
- 3. Anonymous. Title withheld for double-blind review, 2025. Submitted to *British Machine Vision Conference (BMVC)* (h5-index: 65)

International Journals

- 1. Anonymous. Title withheld for double-blind review, 2025. Submitted to *IEEE Transactions on Knowledge and Data Engineering (TKDE)* (IF: 8.9, Rank: 2%)
- 2. Anonymous. Title withheld for double-blind review, 2025. Submitted to *Neural Computing and Applications (NCAA)* (IF: 4.5, Rank: 26%)

LANGUAGES & SKILLS

- Korean (native), English (conversational)
- Pytorch, MATLAB, C
- LATEX, Microsoft Office, Ubuntu, Windows

TEACHING ASSISTANT

Teaching Assistant (TA)

Jun. 10-13 and 23-25 2025

AI course (machine learning, deep learning) LG Display

Graduate Student Teaching Assistant (TA)

Spring 2025

Introduction to Industry-Academia Project Computer Science and Engineering (CSE), Dongguk University (DGU)

Teaching Assistant (TA)

Signal Processing, Image Processing LX Semicon

Graduate Student Teaching Assistant (TA)

Spring 2024

Creative Engineering Design Computer Science and Engineering (CSE), Dongguk University (DGU)

Revised June 15, 2025

Aug. 19-23 2024