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 Eduaction, 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. Hyeongseob Jo, 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, Hyeongseob Jo, 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

AI course (machine learning, deep learning) *Jun. 10–13 and 23–25 2025*
LG Display

Introduction to Industry-Academia Project (CAI7177-01) *Spring 2025*
Computer Science and Engineering (CSE), Dongguk University (DGU)

Signal Processing, Image Processing *Aug. 19–23 2024*
LX Semicon

Creative Engineering Design (CSC2004-03) *Spring 2024*
Computer Science and Engineering (CSE), Dongguk University (DGU)

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