



00 LAB INTRODUCTION

From seeing to making.

Dongseo University · Department of Computer Engineering

Sang-Geol Lee, Ph.D. Principal Investigator



01 WHO WE ARE

From seeing to making.

We read the world with computer vision and rewrite it with generative models.
Starting from models that understand images and video, we build the models that
create them — training, deploying, and teaching them ourselves.

01

Computer Vision

Where the lab began. 25 related papers.

1.1 Image and video analysis

1.2 object recognition and tracking

1.3 character recognition

1.4 medical imaging

02

Generative AI

We work directly on open-source generative models and fix what needs fixing. 4 related papers.

2.1 Image and video generation and editing

2.2 diffusion models

2.3 GANs

2.4 media synthesis pipelines

03

Others

We push language models beyond text: 11 related papers.

3.1 Local LLMs and agents

3.2 reinforcement learning applications

3.3 signal processing

3.4 AI education

Research projects · systems

Ongoing R&D projects and systems the lab built

Project · system	Type	Period	Status
Improving Generative AI Models for Cultural Content Production	Virtual Convergence Technology Research Institute R&D	2025 –	Ongoing
Generative AI for Content Production Workflows	Industry–academia joint R&D	2026 –	Ongoing
Local LLM Multi-Agent System	Lab project	2026 –	Ongoing
ComfyUI Content Generation Pipeline	Lab project	2026 –	Ongoing
Lab AI Server	Lab project	2026	Completed

9 research results are listed with the papers · smartgenerationlab.github.io/en/projects.html

Publications

2003–2026 · Google Scholar

40

PUBLICATIONS

Journal and conference papers

26

JOURNAL

Journal papers

10

SINCE 2024

Generative AI · LLM · agents (2024–)

Recent activities

Academic · Teaching · Lab

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- | | | |
|----|-------------------------|---------------|
| 01 | Website Relaunch | 2026.09 · Lab |
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| 02 | ISPACS 2026 Web Chair | 2026.08 · Academic |
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| 03 | SG Lab Brand Finalised | 2026.07 · Lab |
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| 04 | Generative AI Workshop for University Staff | 2026.06 · Teaching |
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| 05 | Computer Vision System Design · Software Studio 1 · Advanced Programming | 2026.03 · Teaching |
|----|---|--------------------|
-

11 activities in total

smartgenerationlab.github.io/en/activities.html

Sang-Geol Lee, Ph.D.

이상걸 · Principal Investigator

Education

Ph.D. in Electrical, Electronic and Computer Engineering, Pusan National University

M.S. in Computer Engineering, Pusan National University

B.S. in Information and Computer Engineering, Pusan National University

Career

Associate Professor, Department of Software, Dongseo University (current)

Research Professor, WE-UP Programme, Dongguk University

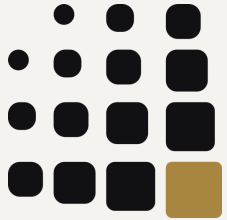
Research Fellow, BK21+ Programme, Pusan National University

Interests

deep learning, machine learning, neural networks, computer vision, image processing.

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Looking for people to build with.

Graduate and undergraduate applications, industry collaboration, and joint research proposals are all welcome by email.

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