

Sangmin Lee

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📍 Republic of Korea

🌐 sangmin1208.github.io🔗 [SangMin1208](#)

Education

- M.S. Korea Advanced Institute of Science and Technology (KAIST)**, Graduate School of Data Science (GSDS), KIRC Lab Daejeon, Korea
Mar 2027 – Feb 2029
- Incoming M.S. student (starting March 2027)
 - Research interests: fine-tuning Large Language Models (LLMs) specialized for the medical domain
- B.S. Jeonbuk National University**, Statistics, College of Natural Sciences Jeonju, Korea
Mar 2021 – Feb 2027
- Total GPA: 4.40 / 4.5, Major GPA: 4.47 / 4.5

Experience

- Vision and Learning Lab (UVLL), UNIST**, Undergraduate Researcher Ulsan, Korea
Jan 2026 – July 2026
7 months
- Advised by Prof. Seungryul Baek
- Focused on 3D vision, human mesh recovery (HMR), and Vision-Language-Action (VLA)
 - Studied SMPL-based human mesh recovery and motion reconstruction
 - Surveyed and presented recent research trends in egocentric vision and VLA at lab seminars
- Multiscale Lab, Jeonbuk National University**, Undergraduate Researcher Jeonju, Korea
Jan 2025 – Dec 2025
1 year
- Advised by Prof. Guebin Choi
- Focused on data-adaptive approaches in multiscale analysis
 - Studied deep learning applications in NLP and computer vision
 - Prepared a research poster and participated in an academic conference
- Jeonbuk National University**, Teaching Assistant, Statistical Thinking and Society Jeonju, Korea
Mar 2025
- Prepared and reviewed instructional materials
- LG Aimers (6th)**, Participant Jeonju, Korea
Jan 2025 – Feb 2025
2 months
- Completed coursework on Artificial Intelligence and Linear Algebra
 - Participated in a data competition using infertility-related medical data
- JBNU Big Data Club (JBIG)**, Member Jeonju, Korea
Mar 2024 – Aug 2024
6 months
- Participated weekly in Dacon and Kaggle competitions, followed by code presentations during club seminars

Projects

- Medical Image Analysis** Sept 2025 – present
- Collaborating with a university hospital on deep learning-based medical image analysis
 - Developing AI models for clinical data analysis and diagnostic support
 - Working on improving the accuracy and efficiency of medical imaging workflows

Deep Neural Networks for Protein Function Prediction

June 2025 – July 2025

- Developed and benchmarked deep learning approaches for enzyme function prediction using the ESM-2 protein language model
- Implemented ESM-2 + Random Forest and ESM-2 + Multi-Layer Perceptron architectures to predict Enzyme Commission (EC) numbers
- Achieved the best performance with the MLP approach (Micro F1: 0.89, Macro F1: 0.77), improving over similarity-based methods
- Applied hyperparameter optimization and class imbalance handling to improve performance on rare enzyme classes

Deep Learning-based Neural Granger Causality for Solar Radiation Data

Mar 2025 – June 2025

- Addressed the limitations of traditional VAR models in capturing nonlinear dependencies in time series data
- Implemented component-wise MLP (cMLP) and LSTM (cLSTM) models, assigning an independent network to each variable
- Analyzed Granger causal relationships between solar radiation in Jeonju and key meteorological variables
- Identified causality structures consistent with established relationships in solar meteorology

Honors and Awards

Academic Excellence Scholarship, Sancheong-gun Local Scholarship

May 2026

Received in 2021.05, 2024.05, 2024.11, 2025.05, 2025.11, and 2026.05
Sancheong-gun

Challenge Award, J-Point Scholarship Program

July 2025

JBNU SW-Center

First Prize, 2024 Big Data Camp - Prompt Engineering Competition

Jan 2025

COSS

Yellow Belt, Keun-Saram (Great Person) Project

Dec 2024

Jeonbuk National University

Grand Prize, 2024 Jeonbuk National University AI Competition

June 2024

Jeonbuk National University

Presentations

- Poster: Deep Learning-based Neural Granger Causality for Solar Radiation Data, The 2025 Summer Conference of the Korean Statistical Society, Gyeongju, Korea (Jun. 2025)

Certificates

SQLD: SQL Developer

Dec 2025

ADsP: Advanced Data Analytics Semi-Professional

Nov 2025

Computer Specialist in Spreadsheet & Database Level-1

Feb 2022

Skills

Programming

Python, R, C, C++

APIs & Frameworks

PyTorch, Scikit-learn, Transformers, Hugging Face