

B.S. Candidate, Computer Engineering
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GYUYEON LIM

education

- 2023–2027 B.S. in Computer Engineering, Gachon University, Seongnam-si (expected).
– GPA: 4.41 / 4.5 (121 of 120 credits)
– Research guidance from Prof. Myung-Kyu Yi, Institute of Biomedical Engineering, Hanyang University (since 2024.06)
– Graduation thesis advised by Prof. Yourim Yoon, Gachon University
- 2020–2023 Mathematics & Science Intensive Program, Hyosung High School, Seongnam-si.

research
interests

- Representation Learning.* Learning compact, structured embeddings from high-dimensional data. Focuses on contrastive and self-supervised methods, data embedding, and latent space geometry.
- Deep Learning on Time Series.* Temporal and spatio-temporal modeling for forecasting and classification of multivariate sensor streams. Covers sequence models, graph-based dependencies, and large-scale time-series architectures.
- AI for Science.* Applying deep learning to physical and biological signals — IMU, EEG, and multivariate sensor data. Integrates physics priors, domain constraints, and signal structure into model design.

publications
(journal
articles)

- 2026.07 Gyuyeon Lim and Myung-Kyu Yi. “LPSN: A Learnable Parametric Spectral Network for Wearable Human Activity Recognition.” *IEEE Sensors Journal*, Early Access (IF 4.5). [DOI](#).
- 2026.04 Gyuyeon Lim and Myung-Kyu Yi. “Rotation-Robust Self-Supervised Learning for IMU-Based HAR with Multi-Scale Convolutional Backbones.” *IEEE Transactions on Consumer Electronics* (IF 10.9). [DOI](#) • [Code \(InceptionMK\)](#).
- 2026.03 JunYoung Park, Gyuyeon Lim, and Myung-Kyu Yi. “Dynamics-Aware Action State Flow for Wearable Human Activity Recognition.” *IEEE Sensors Journal* (IF 4.5). (2nd author) [DOI](#).
- 2026.03 Gyuyeon Lim and Myung-Kyu Yi. “Robust Sensor-Based Activity Recognition via Physics-Aware Disentangled Representation Learning and Feature-wise Linear Modulation Conditioning.” *IEEE Sensors Journal* (IF 4.5). [DOI](#) • [Code \(PADR\)](#).

	2026.02	Gyuyeon Lim and Myung-Kyu Yi. "CAP-SSM: Context-Aware Prototypes and Selective State-Space Modeling for Efficient Wearable Human Activity Recognition." <i>IEEE Sensors Journal</i> (IF 4.5). DOI • Code (CAP-SSM) .
	2026.01	Gyuyeon Lim and Myung-Kyu Yi. "Prototype-Guided Physics-Modulated Perceiver for Human Activity Recognition." <i>IEEE Internet of Things Journal</i> (IF 8.9). DOI • Code (P2-Perceiver) .
	2025.09	Gyuyeon Lim and Myung-Kyu Yi. "Contrastive Learning for Zero-Shot Human Activity Recognition Using Labeled Simple Actions on Wearable Devices." <i>IEEE Sensors Journal</i> (IF 4.5). DOI • Code (ZSL-HAR) .
research experience	2025.12–Present	Research Intern, Seoul National University Graduate School of Data Science, SKI-ML (Prof. Jay-Yoon Lee), Seoul. – Structure and Knowledge Injection into Machine Learning (SKI-ML lab) – Spatio-temporal multivariate modeling for large-scale time-series with graph dependencies (targeting AAAI 2027) – Co-authored NeuroX-EEG, submitted to NeurIPS 2026 in collaboration with the Connectome Lab (Prof. Jiook Cha)
	2025.02–2025.06	Undergraduate Research Intern, Seoul National University Hospital, BMI Lab (Prof. Kwangsoo Kim), Yeongeon, Seoul. – Biomedical Informatics Lab (SNUH BMI LAB) – Holter Foundation Model and MLOps Development Team
teaching experience	2026.01–Present	High School Math Instructor, Myungmun Seoil Academy Premium, Seongnam-si. – CSAT (Suneung) and school exam preparation, STEM track focus
	2025.09–Present	Math-based University Essay Instructor, Nonsoolmate , Seoul (Remote). – Grading and coaching students on math-based university admissions essays
	2023.06–2026.06	Lead Math Instructor, Metrix Mathematics Institute (HB Math&Eng), Seongnam-si. – Primary instructor for middle and high school students (grades 2–3) and CSAT retakers – Specializing in CSAT preparation for STEM track students
scholarships	2025.12	SCI Publication Scholarship, Gachon University — the Highest Honor.
	Every semester	Academic Excellence Scholarship, Gachon University.
	From 3rd year	National Science & Technology Scholarship, Ministry of Science and ICT (MSIT).

	2024.01	Science & Engineering Excellence Scholarship, Anyang-Gwacheon Chamber of Commerce and Industry.
honors & awards	2026.01	P-Career Catch 2 — Outstanding Completion, Career Exploration Credit Program, Gachon University. GitHub .
	2025.05	Severance Challenge Award, 2025 Yonsei Yongin Severance Hospital Healthcare Hackathon.
	2025.06	3rd Place, AI/SW Day Oral Presentation, Gachon University — YOLOv5 Children Protection Area detection. GitHub .
	2024.10	ICPC Seoul Regional Finalist, Team GPT — 168th of 376 teams, KINTEX, Goyang-si. Official .
	2024.01	Grand Prize, Future Design Project, Gachon University (1st place).
	2023.06	Grand Prize, Software Competition, Gachon University (1st place) — Smart Home with Physical Computing.
	2018.11	Minister of Oceans and Fisheries Award, 2018 National Student Science and Invention Competition.