

Kangmin Kim (김강민)

📍 KAIST, Republic of Korea

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Personal Profile

I am a third-year undergraduate student in Computer Science and Mathematical Sciences at KAIST. I expect to complete my B.S. in 2030 (including mandatory military service) and plan to pursue a Ph.D. in machine learning theory. My research interests include:

- ML/AI Mathematical Theory
- Optimization
- Sparse Recovery
- Explainable AI
- Statistics

Education

 Korea Advanced Institute of Science and Technology (KAIST) B.S. in Computing Sciences • Double Major in Mathematical Sciences, total GPA: 4.13/4.3 • Tuition and stipend fully covered by National Science and Engineering Excellence Scholarship • Military service (planned in 2028, but could be later)	Daejeon, Republic of Korea Feb. 2025 – Current
 University of California, Berkeley Exchange Student Program • Summer visiting student; coursework in Computer Security (CS161) and Internet Architecture (CS168) • Tuition and stipend fully covered by KAIST Presidential Fellowship.	Berkeley, CA Jun. 2025 – Aug. 2025
 Korean Science Academy (KSA) High School • Science High School for Gifted Students	Busan, Republic of Korea Feb. 2022 – Feb. 2025

Experiences

Individual Study: Dictionary Recovery via Autoencoders based on Sparsity Undergraduate Student @ KAIST • Advised by Prof. Wooseok Ha (MAS, KAIST) • Theoretical analysis on autoencoders, LoRA, sparse coding (paper reading)	Daejeon, Republic of Korea Dec. 2025 – Mar. 2026
Workshop on Algorithm for Students 2026 Seminar Participant • Resources: [Homepage]	POSTECH Jan. 2026

Awards

2026 Fall	Honors Program , KAIST	Republic of Korea
2025 Fall	Dean's List , The School of Freshman, KAIST	Republic of Korea
2025	Gold Prize, National University Mathematics Competition , Korean Mathematical Society	Republic of Korea
2025	The National Scholarship for Science and Engineering , Korea Student Aid Foundation	Republic of Korea
2025 – 2030	KAIST Presidential Fellowship , KAIST	Republic of Korea
2022 – 2023	Hanseong Scholarship for Gifted Students , Hanseong Sonajehan Scholarship Foundation	Republic of Korea

Teaching Experiences

2026 Fall	CS322(Introduction to Automata Theory) , TA	KAIST
2026 Fall	MAS201(Introduction to Ordinary Differential Equations) , Help Desk	KAIST

Relevant Coursework

Mathematics

Daejeon, Republic of Korea

Undergraduate Student @ KAIST

2025 –

- Calculus, Linear Algebra, Differential Equations, Learning Theory, Mathematical Statistics, Numerical Analysis, Advanced Statistics, Topology

Computer Science

Daejeon, Republic of Korea

Undergraduate Student @ KAIST

2025 –

- Data Structures, Intro to Algorithms, Programming Languages, System Programming, Functional Programming, Formal Language and Automata, Intro to Databases, Computer Architecture, Intro to Machine Learning, Intro to Reinforcement Learning, Computer Security, Networks

Conducted/(ing) Projects

Daejeon, Republic of Korea

Undergraduate Student @ KAIST

2025 –

- CS377: Intro to RL, Spring 2026
 - Instructor: **Sungjin Ahn** (School of Computing, KAIST)
 - Collaborator: Dongha Gwak, Seojin Yun (School of Computing, KAIST)
 - Project Topic: *Multi-Agent Reinforcement Learning on Mario Kart Environment*
- MAS473: Learning Theory, Fall 2025
 - Instructor: **Wooseok Ha** (Dept. of Mathematical Sciences, KAIST)
 - Collaborator: Jaemin Lim (School of Computing, KAIST)
 - Project Topic: *Investigating Attack and Defense Strategies on Linear Classification Using Adversarial Training*
- CS161: Computer Security, Summer 2025 (Berkeley Exchange)
 - Instructor: **Jonah Bedouch** (EECS Berkeley)
 - Collaborator: Jaemin Lim (School of Computing, KAIST)
 - Project Topic: *Developing a File Transfer Protocol and securing it via cryptography*

Skills

Languages Native: Korean
Highly Proficient: English(TOEFL 112/120, TOEIC 940/990)

Programming Familiar: **Python** 🐍 (**PyTorch**, **NumPy**, etc.), git
Novice: C, C++, Java, SQL (Postgres), HTML/CSS

Computer Misc. Familiar: $\text{\LaTeX}$ (Overleaf/VSCode), Microsoft Office,
Novice: manim

Extracurricular Activities

2026 Fall	KAIST Vlab (AI Club) , President	KAIST
2026 Spring	KAIST Vlab (AI Club) , Vice President	KAIST
2026	KAIST Msquare (Mathematics Club) , ML(Math Letter) Editor	KAIST
2026	GRASP(Graph Research) , Automata Research Group	KAIST