

Jehyun Park

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RESEARCH INTERESTS

Theoretical foundations of neural network generalization and optimization
Function space and Circuit based understanding of Neural Networks
Meta-learning and few-shot adaptation in distribution shift scenarios

EDUCATION

Mar 2020 — Feb 2026	<i>Sungkyunkwan University</i> <i>BS., Computer Science and Engineering</i>	<i>Suwon, Korea</i>
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EXPERIENCES

Dec 2025 - Present	Research Intern, Seoul National University SNU-PI Lab	<i>SNU</i>
	<ul style="list-style-type: none">• Conducting Research in Optimization, Reasoning• Optimizing Sequence-Modeling architectures (Transformer, SSMS) and Optimizers• Multi-modal reasoning with Representation Learning and Reinforcement Learning• Under the supervision of Prof. <i>Young Jae Yu</i>	
Mar 2025 — Aug 2025	Undergraduate Research Intern, Yonsei University ML/AI Lab	<i>Seoul</i>
	<ul style="list-style-type: none">• Conducted Research in Few-shot Learning, Task Vectors, Test-Time-Training• Implemented algorithms and methods on task vectors in In-Context-Learning• Focused on Solving Out-Of-Distribution Problem, Catastrophic forgetting• Under the supervision of Prof. <i>Kyung Woo Song</i>	
Sep 2024 — Feb 2025	AI Researcher, The Catholic University of Korea St. Vincent's Hospital	<i>Suwon</i>
	<ul style="list-style-type: none">• Implemented machine learning algorithms for fall risk prediction protocol• Handled imbalanced patient data with K-NN imputer, t-SNE, Sent2Vec embeddings.• Implemented Imbalanced-XGBoost based pipeline and achieved the best <i>f1-score</i>.	
Jun 2024 — Aug 2024	Undergraduate Research Student, iisLab	<i>SKKU</i>
	<ul style="list-style-type: none">• Participated seminars for subjects such as Diffusion, Active-Learning, Flash-Attention• Presented in Machine Learning Seminars in iisLab• Under the supervision of Prof. <i>Ji Hyung Lee</i>	
Jun 2023 — Aug 2023	Industry-Academia Collaboration Software Engineer, SOYNET	<i>Seong Nam</i>
	<ul style="list-style-type: none">• Participated in a year-long Industry-Academia Collaboration Project between SKKU & <u>Soynet</u>• Worked at the Company as a Software Engineer for 2 months• Ported Pytorch-based models to Tensorflow-based SOYNET Acceleration Engine• KIST University Person RE-ID model Optimization Applied at National Safety SQI Soft Task	

AWARDS & PROJECTS

Jan 2026	2025 Korea Software Congress Excellence Award,	<i>Yeosu</i>
	<ul style="list-style-type: none">• Excellence Award in Undergraduate Paper Competition• KSC 2025 held at Korean Institute of Information Scientists and Engineers• Received for paper “<i>Adaptation in Out-Of-Distribution via Sparse Autoencoders in Vision Transformers</i>”, sole author in Undergraduate division.	
Aug 2025 — Sep 2025	2025 Samsung AI Challenge 1st Prize Winner	<i>Suwon</i>
	<ul style="list-style-type: none">• Theme: Methods to Reduce Large Model Size Without Performance Degradation• <i>Individually</i> competed on optimizing and compressing Large Language Model• Implemented <i>Context-aware-Expert-Merging-and-Pruning</i> Method on Qwen-30B-A3B Model• Compressed 30B Parameters to 23.9B by training-free Expert Merging and Pruning• 1st prize winner and Awarded 7,500\$ from Samsung AI Center	
Jul 2024 — Feb 2025	20th Korean Economic Securities Derivatives Competition 2nd Place	<i>Seoul</i>
	<ul style="list-style-type: none">• Designed an ETF for IPO stocks in KOSPI & KOSDAQ Stock Market as part of a Team• Used GMM and t-SNE, Weighted K-NN for for Unsupervised similarity analysis• Portfolio Revenue Optimization using Disciplined Convex Programming and SLSQ Programming• 2nd place and Awarded 4,500\$ with Korea Exchange Chairman's Award	
Jul 2024 — Jan 2025	LLM-based Recommendation System Health care Startup, iKooB	<i>Seoul</i>
	<ul style="list-style-type: none">• “Exploration of AI model architecture based on transfer learning Development of model data management platform” Collaborating with <u>iKooB</u>• Optimized a finetuned Llama-3 based 8B model on medical domains, implemented TF-IDF method and Chain-of-Thought (COT), Prompt tuning for Prototype model• Received Engineering Innovation Award from SungKyunKwan University	
Dec 2023 — Jan 2024	Winter Global Capstone Design Project, AIIT & SKKU	<i>Tokyo, Japan</i>
	<ul style="list-style-type: none">• Collaborated with Tokyo AIIT University and participation in seminars and presentations• Presented an effective construction scenario for signaling system cloud infrastructure for mobility Scenario proposal for integrated cloud and AI-based solutions	
Sep 2023 — Dec 2023	2023 NH Investment & Securities Big Data Competition <i>Finals</i>	<i>Seoul</i>
	<ul style="list-style-type: none">• Designed and trained a Vanilla Transformer Encoder for correlation analysis (<u>Fin2Vec</u>)• Used 1D-CNN, GRU for stock price data compression and tokenization• Implemented Self-Supervised Learning algorithm based on Self-Distillation and EMA (data2vec)	
Jun 2023 — Dec 2023	Development of SNS platform exclusively for college students	<i>SKKU</i>
	<ul style="list-style-type: none">• Sungkyunkwan University Startup Support Group: A SNS App development project: (<u>CLIPPED</u>)• Participated as a Project Manager and Frontend Developer• Implementation stack: Flutter, AWS, next.js	
Jan, Sep 2020 / Sep 2023	<i>Sungkyun Software Scholarship</i> for bachelor's scholarship	<i>SKKU</i>
	<ul style="list-style-type: none">• <i>Sungkyun Software Scholarship</i> Received from SungKyunKwan University• 3000\$ for each 3 Semesters, total amount of 9000\$ scholarship received.	

PUBLICATIONS

Adaptation in Out-Of-Distribution via Sparse Autoencoders in Vision Transformers

Korean Institute of Information Scientists and Engineers 2025 (bachelor's thesis')

Je Hyun Park*

Development of an Artificial Intelligence Algorithm for Fall Prediction (Poster Presentation)

Korean Society of Medical Informatics (KOSMI) Fall Conference, November 2025

Jaheon Park*, Yeon Woong Chung, M.D., Ph.D.†‡, Seung Hyun Ko, M.D., Ph.D. Ph.D.§

Development of an Artificial Intelligence Algorithm for Fall Prediction (Poster Presentation)

Korean Society of Artificial Intelligence in Medicine (KOSAIM) Annual Conference, October 2025

Yeon Woong Chung, M.D., Ph.D.†‡, **Jaheon Park***, Seung Hyun Ko, M.D., Ph.D. Ph.D.§

SKILL	Programming		
	Python	Various machine learning & processing libraries such as <u>Pytorch</u> , <u>scikit-learn</u> , <u>Numpy</u> , cupy, cxypy	3
	C, C++	Conducted many system-architecture college projects XV6, Spike-simulator, ns3, mini-shell	2
	CUDA	Optimization of pytorch functions : im2col, and XGBoost Minimal Variance Sampling methods	1
	Next, Node.js	Web Projects using Next.js and Node.js with tailwind-css	1
	Flutter	Developed front-end app for the SNS platform	1
	Language		
	Korean (Native)		
	English (Fluent) (TOEIC: 930)		
