

Jehyun Park

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Research Interests

Machine Learning, dealing with manifolds and optimization for models dealing with Industrial or medical domains such as continuous data and tabular data, understanding the model's output for generalization. Convex optimization and solving the generalization problem (grokking) through mathematical methods such as Taylor series, Fourier or Laplace transformation. Finding the learning mechanism behind memorization and understanding and the mechanisms of Neural Fields.

EDUCATION

Mar 2016 — Mar 2019

High School Diploma, Yeongdong High School, Seoul, Korea

Mar 2020 — Present

Sungkyunkwan University, Suwon, Korea

BS., Computer Science and Engineering

GPA: 3.90/4.50

HISTORY

Sep 2024 — Present

AI Researcher, The Catholic University of Korea St. Vincent's Hospital

Suwon

- Implementing machine learning algorithms to create protocol
- Feature engineering patient data and handling imbalanced dataset with methods such as K-NN imputer, t-SNE, Tomek-links.
- Extracting meaningful vector for categorical features using Sent2Vec.
- Using Imbalanced-XGBoost and handled hyperparameters to successfully achieve the desired f1-score.

Jun 2024 — Aug 2024

Undergraduate Research Student, iisLab

SKKU

- Attended as an undergraduate research student in iisLab led by prof. ji-hyung Lee
- Participated seminars for subjects such as Computer Vision, Natural Language Processing
- Presented in Machine Learning Seminars for subjects such as Unsupervised Learning, Optimization methods, Recurrent Neural Networks

Mar 2024 — Jun 2024

Artificial Intelligence College Conference, TNT

SKKU

- Participated in AI College Conference Test and Train for weekly studies
- Prepared and Presented Papers about self-RAGs and Mistral attention mechanisms
- Joined and conducted studies about the basics of Reinforcement Learning

Jun 2023 — Aug 2023

Industry-Academia Collaboration Software Intern, SOYNET

Seong Nam

- Participated in a year-long Industry-Academia Collaboration Project between SKKU & Soynet
- Learned the basics theories of machine learning & Coding skills
- Worked at the Company as a Summer Internship for 2 months
- Pytorch, CUDA, C++ for AI Inference acceleration and model optimization
- KIST University Person RE-ID model Optimization Applied to National Safety SQI Soft Task

Project & Awards

Jul 2024 — Feb 2025

20th Korean Economic Securities Derivatives Competition 2nd Place

Seoul

- Worked on by the purpose of designing an ETF for IPO stocks
- Used Gaussian-Mixture-Model and t-SNE, Weighted K-NN for finding the characteristics

	<ul style="list-style-type: none"> of newly IPO companies with Original KOSPI & KOSDAQ market prices For implementing Portfolio optimization used convex optimization methods such as Disciplined Convex Programming and SLSQ Programming Participated in the competition as a Research Engineer and took 2nd place Received Korea Exchange Chairman's Award 	
Jul 2024 — Jan 2025	LLM-based Recommendation System Health care Startup, iKooB	Gangnam, Seoul
	<ul style="list-style-type: none"> Started off as a SKKU Research Project for “Exploration of AI model architecture based on transfer learning Development of model data management platform” Collaborating with iKooB, experimented with various methods such as transfer learning on LLMs and Graph Attention Networks (GAT) for Implementing Recommendation system Using a finetuned Llama-3 based 8B model on medical domains, implemented TF-IDF method and Chain-of-Thought (COT), Prompt tuning for Prototype model Implementation stack: vllm, langchain, ngrok, flask Received Engineering Innovation Award from SungKyunKwan University 	
Dec 2023 — Jan 2024	Winter Global Capstone Design Project, AIIT & SKKU	Tokyo, Japan
	<ul style="list-style-type: none"> Started a project Proposing a Mobility cloud infrastructure solution for the FSD era Collaboration with Tokyo AIIT University and participation in seminars and presentations Proposed an effective construction scenario for signaling system cloud infrastructure for mobility Scenario proposal for integrated cloud and AI-based solutions 	
Sep 2023 — Dec 2023	NH Investment & Securities Big Data Competition Finals	Seoul
	<ul style="list-style-type: none"> Designed and trained a Transformer-based correlation analysis model between stocks (Fin2Vec) Used 1D-CNN, GRU for stock price data compression Used Transfomer Encoder architecture for correlation analysis and implemented knowledge distillation method by teacher-forcing 	
Jun 2023 — Dec 2023	Development of SNS platform exclusively for college students	SKKU
	<ul style="list-style-type: none"> With support from Sungkyunkwan University Startup Support Group started a SNS app development project: (CLIPPED) Purpose of launching a Startup and Conducted actual testing. Participated as a Project Manager and Frontend Developer Implementation stack: Flutter, AWS, next.js 	

SKILL	Programming	
	Python	Various machine learning & processing libraries such as Pytorch, scikit-learn , Numpy , cupy, cxypy 3
	C, C++	Conducted many system-architecture college projects such as XV6, Spike-simulator, ns3, mini-shell 2
	CUDA	Conducted acceleration tasks to Pytorch functions such as im2col, and XGBoost Minimal Variance Sampling methods 1
	Next, Node.js	Developed 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)	