HEEJUN KIM

🌐 Homepage   ✉ Email   ⚙ GitHub   🎓 Google Scholar

EDUCATION

Gwangju Institute of Science and Technology (GIST)   *February 2020 - present*
B.S Major: Electrical Engineering and Computer Science, GPA 4.18/4.50
Minor: AI, Mathematics
Location: Gwangju, South Korea
Senior year of college

University of California, Berkeley (UC Berkeley)   *June 2024 - August 2024*
Summer Session, GPA 4.0/4.0
Coursework: Introduction to Artificial Intelligence, Principles & Techniques of Data Science

RESEARCH EXPERIMENTS

Data Science Lab   *Feb 2025 - present, January 2024 - June 2024*
Research Assistant   *Gwangju, South Korea*
- Supervised by Prof. Sundong Kim
- Developed an architecture that applies generative models to reinforcement learning, combining existing problem-solving approaches to devise new methodologies for solving the Abstract Reasoning Corpus (ARC).
- Researched test-time adaptation with reinforcement learning for self-improving reasoning capabilities of large language model

Forschungszentrum Jülich   *September 2024 - February 2025*
Korea-Germany Junior Research Fellowship Program 2024   *Jülich, Germany*
- Host Institute: INM-7 directed by Prof. Simon B. Eickhoff and contributed to Mathematical Neuroscience Group led by Dr. Oleksandr Popovych.
- Researched about MRI processing on disease classification and prediction by machine learning
- Developed a preprocessing pipeline to generate highly refined multi-modal MRI human connectome data from large-scale Parkinson's patient data (PPMI) using High-Performance Computing (HPC) and Hyper-Threading technology. (Project Supervisor: Dr. Kyesam Jung)
- Fund: 12,000,000KRW (8,197EUR) by National Research Foundation of Korea (NRF)(No. RS-2023-00254343).

PUBLICATIONS

Diffusion-Based Offline RL for Improved Decision-Making in Augmented ARC Task
Yunho Kim, Jaehyun Park, <u>Heejun Kim</u>, Sejin Kim, Byung-Jun Lee, Sundong Kim
arXiv:2410.11324

PROJECTS

Skill-based Reinforcement Learning with UCB Skill Selection   *May 2025 - June 2025*
- Reproduced BeCL framework for unsupervised skill discovery in reinforcement learning environments
- Developed Multi-Armed Bandit approach with UCB algorithm to improve downstream task adaptation efficiency. [Poster]

Jeju Special Product Price Prediction AI Competition   *November 2023 - December 2023*
- Predicted price for Locally Produced Goods in Jeju using machine learning

Hyundai AI Challenge   *September 2023 - October 2023*
- Processed large-scale port logistics datasets (cleaning, feature extraction, temporal aggregation).
- Built tree-based boosting models to predict ship waiting times.
- Ranked Top 25/330 teams among 1,300+ participants.

LEADERSHIPS

Teaching Assistant *Fall 2025*
· Machine Learning & Deep Learning (AI5213/EC4213): led TA sessions, held office hours, managed assignments/exams, and organized Kaggle competition. [Homepage]

Korea Army Instructor *February 2021 - August 2022*
· Served as an Army instructor in the 50th Division in Daegu, South Korea
· Conducted basic training for approximately 2000 military personnel

EXTRA ACTIVITIES

Google Developer Student Club *September 2023 - February 2024*
· Participated in an AI study focused on machine learning and deep learning
· Studied models in ML/DL and analysis of top team models in Kaggle AI competitions
· Established study directions and organized study materials as a team leader

Financial Investment Conference *March 2023 - March 2024*
· Conducted a study on economics
· Analyzed and presented economic markets on a weekly basis

GIST Club Federation *February 2020 - December 2020*
· Managed clubs in Gwangju Institute of Science and Technology

SKILLS

Programming Languages	Python, C/C++
Python Packages & Framework	PyTorch, VeRL, Scikit-learn, Pandas, Numpy, Matplotlib, Ray
Operating System	Linux, Windows, MacOS
Others	Docker, Wandb, SLURM, HTCondor, SQLite

HONORS

Government Scholarship, Gwangju Institute of Science and Technology	*2020 - present*
Government Scholarship, STEM scholarship	*2020 - present*
Dean's List, College of Information and Computing, GIST	*Spring 2025*
GIST International Internship Support Program	*September 2024 - February 2025*
Korea-Germany Junior Research Fellowship Program 2024	*September 2024 - February 2025*

· Organized by the Max Planck POSTECH/KOREA Research (MPK)