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JAEWON KIM

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RESEARCH INTERESTS

My research is at the intersection of deep learning and medicine. I am particularly interested in **representation learning, generative AI, and explainable AI, to develop trustworthy and clinically applicable medical AI systems.** Given the rapid evolution of the field, I am always open to exploring emerging directions in deep learning.

EDUCATION

Seoul National University — Seoul, ROK
Ph.D. in Biomedical Sciences — Sep. 2020 – Feb. 2026 (expected)

- GPA 3.93/4.3, Advised by Prof. Sang Min Park
- Dissertation: Developing Explainable Foundation Models for Opportunistic Screening: A Multidimensional Evaluation Framework

Tsinghua University — Beijing, China
B.E. in Computer Science and Technology — Sep. 2016 – Jun. 2020

SELECTED PUBLICATIONS/PREPRINTS [GOOGLE SCHOLAR]

* *indicates equal contribution*

Explainable opportunistic osteoporosis screening from chest X-rays: A retrospective comparison of foundation models
Jaewon Kim, Sangmin Kwak, Hyeokjong Lee, Jooyoung Chang, Sang Min Park
Osteoporosis International (IF 5.4) [PDF]

Optimizing Retinal Images Based Carotid Atherosclerosis Prediction with Explainable Foundation Models
Hyeokjong Lee*, Jaewon Kim*, Sangmin Kwak, Azka Rehman, Sang Min Park, Jooyoung Chang
npj Digital Medicine (IF 15.1) [PDF]

Developing an explainable Deep Neural Network for stress detection using biosignals and human-engineered features
Hyeokjong Lee, Jaewon Kim, Bohyung Han, Sang Min Park, Jooyoung Chang
Biomedical Signal Processing and Control (IF 4.9) [PDF]

Opportunistic AI for enhanced cardiovascular disease risk stratification using abdominal CT scans
Azka Rehman, Jaewon Kim, Hyeokjong Lee, Jooyoung Chang, Sang Min Park
Computerized Medical Imaging and Graphics (IF 4.9) [PDF]

Generalized Supervised Contrastive Learning
Jaewon Kim, Hyeokjong Lee, Jooyoung Chang, Sang Min Park
arXiv preprint [PDF]

AWARDS

Youlchon AI for All Fellowship — 2022, 2023
The Youlchon Foundation & Seoul National University AI Institute

Graduate Student Instructor Scholarship — 2021, 2022, 2023
Seoul National University

TEACHING EXPERIENCE

Advanced Explainable AI in Medicine — Seoul, ROK
Graduate Student Instructor
Graduate course at Seoul National University — Spring 2023

Explainable AI in Medicine — Seoul, ROK
Graduate Student Instructor
Graduate course at Seoul National University — Spring 2021

SKILLS

Languages: Korean, English, Chinese
Programming: Python, R, C/C++, Java
Frameworks and Applications: PyTorch, TensorFlow, scikit-learn, Pandas, LaTeX