

HyoBin, Kim

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ABOUT

Research interests span **multimodal deep learning** and **biosignal processing**; recent projects include designing a LangGraph workflow that converts NICE guidelines into OMOP CDM entities and populates a Neo4j knowledge graph, alongside building a diffusion-based model that translates EEG patterns into natural language. I strive to turn cutting-edge research into deployable AI systems that enhance **healthcare and human-AI interaction**.

RESEARCH EXPERIENCE & RESEARCH PROJECT

LAMDA(Learning and Mining from Multimodal Dataset) Lab

Sungkyunkwan University, Department of Applied Artificial Intelligence | May, 2023 to August, 2025

- DELTA : Language Diffusion-based EEG-to-Text Architecture (Master's Thesis)
- Biosensing-Driven Cognitive Augmentation: Real-Time Mind Wandering Detection and Robot Intervention(Ubicomp, 2025)
- Designing and Implementing Real-Time Multimodal Virtual Human for Alexithymia (ASK, May, 2025)
- Mix-Interest: Augmentation in Sequence Data by Mixing the Interest for Sequential Recommendation System (KCC, July, 2025)
- Research on Signal and Natural Language-Based Recommendation Systems (with. Doosan)
- [DIM5005] Teaching Assistant for Immersive Media and Digital Humans Course (Fall, 2024)
- [AAI3029] Teaching Assistant for Conversation agent design and application Course (Spring, 2025)

OTHER PROJECTS

- 2025.02 – 2025.06 | **Building a knowledge graph based on external clinical data (with. SNUH)**
 - Built a LangGraph pipeline converting NICE guideline cohorts to OMOP CDM entities
 - Loaded the results into a Neo4j knowledge graph for clinical use
- 2021.07 – 2021.09 | **Hana Bank Agile Transformation Project (with. The Boston Consulting Group (BCG))**
 - Analyzed Agile adaptability using various metrics and identified improvement points
 - Experienced the process of identifying value in data and improving the current situation
- 2020.05 – 2022.12 | **NH Nonghyup Bank Agile Transformation Project**
 - Visualized data on Agile cultural progress using PowerBI and identified areas for improvement
 - Gained experience in the entire process, from data collection and organization to visualization
- 2020.01 – 2020.03 | **LSE Agile Transformation Assessment Project**
 - Conducted BI analysis on Agile suitability and derived suitability results
 - Understood and analyzed raw data to extract insights and generate BI outputs

CERTIFICATE & AWARDS

- 2023.02 | Computer Proficiency Certification Level 1
- 2022.06 | Industrial Engineer Information Processing
- 2021.10 | Network Manager Level 2
- 2020.01 | SAFe Scrum Master
- 2024.12 | Sungkyunkwan University Simsan Scholarship
- 2024.11 | BOAZ Hackathon Excellence Award
- 2024.11 | Finalist in the KRX Financial Language Model Competition
- 2020.08 – 2023.08 | Soongsil University Academic Excellence Scholarship

- EDUCATION

Sungkyunkwan University

M.S. Dept. of Applied Artificial Intelligence (2023.08 - 2025.08)
- GPA: 4.43 / 4.50

Soongsil University

B.S. Dept. of Computer Science and Engineering (2020.03 - 2023.08)
- GPA: 4.41 / 4.50 (*Summa Cum Laude*)
