

JUHYEONG KANG

AI Researcher & Deployment Strategist Candidate

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WORK EXPERIENCE

Samsung Medison

AI Research Intern Jul 2023 – Dec 2023 Seoul, Korea

- Mapped ultrasound workflows and translated clinician pain points into clear AI tasks.
- Unified a fragmented 10k+ 4D dataset with reusable labeling rules.
- Assessed model-latency-UX trade-offs and aligned stakeholders on solution options.

PROJECTS

LLM + RAG Intent Analysis System

LangChain, LangGraph, FAISS, Qwen, CLOVA X Jan 2024 – Dec 2024

- Rebuilt noisy labels into a behavior-based taxonomy and schema-constrained RAG flow.
- Designed retrieval policies and fallback logic to stabilize reasoning.
- Raised intent accuracy 57% → 84%, reducing errors by 62.6% (99% valid outputs).

Virtual Brain Optimization for Neuromodulation

TensorFlow, TVB, DDPG Jan 2023 – Jun 2023

- Integrated fMRI/sMRI/DTI into individualized brain models for shared evaluation.
- Applied DDPG to optimize stimulation parameters with reproducible metrics.
- Improved similarity by +6.2% (max +15.8%) and cut search time by 3.6×.

EEG-Based OSA Prediction (XAI)

XGBoost, RF, SVR, SHAP Jan 2023 – Jun 2023

- Engineered 29 EEG features and standardized prediction workflows.
- Used SHAP for interpretable AHI/SpO₂ reasoning with clinicians.
- Achieved 85–88% accuracy with reusable analysis templates.

EXTRACURRICULAR

KT AIVLE School 7th Cohort

Digital Transformation Track – Collaboration Award

Mar 2025 – Sep 2025 (840 hrs) Seoul, Korea

- Completed a DX program turning business problems into AI/data projects from scoping to prototype.

The Whisky Store

Customer Experience Staff Feb 2019 – Dec 2019 Singapore

- Served international customers and handled issues in a premium whisky retail setting.

Exchange Program – The University of Hawai‘i

Kapi‘olani Community College Aug 2016 – Dec 2016 Honolulu, HI, US

- Improved English and cultural adaptability through coursework and group projects in an English-speaking environment.

EDUCATION

Ewha Womans University

MS. Artificial Intelligence Convergence

Sep 2022 – Aug 2024 4.28/4.50

BS. Information and Library Science

BS. Psychology

Mar 2020 – Feb 2022 4.13/4.50

Korea Tourism College

AD. Tourism Management

Mar 2016 – Feb 2018 4.33/4.50

SKILLS

Strategic

Problem decomposition, workflow mapping, data scoping, trade-off analysis, stakeholder alignment

Data & Systems

Python, SQL, schema design, entity modeling, FAISS (vector DB)

AI & LLM

LangChain / LangGraph, RAG pipelines, PyTorch, TensorFlow, RL, XAI

LANGUAGES

English

Korean

Chinese

CERTIFICATIONS

OPIc (AL)

Mar 2024

Tensorflow Developer (Google)

Mar 2024

Advanced Data Analytics Semi-Professional

Sep 2024

SQL Developer

Sep 2024

PUBLICATIONS

EEG Feature Engineering for Machine Learning-Based CPAP Titration Optimization in OSA

International Journal of Advanced Smart
Convergence (IJASC)

Sep 2023 1st Author