Shin Young Lee

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Education

Ewha Womans University   *Mar. 2019 - Feb. 2024*
B.A. IN EDUCATIONAL TECHNOLOGY   *Cum Laude*
GPA: 3.82 / 4.3

Research Interests

- Multimodal Digital Twin Modeling for Knowledge Tracing
- GraphDB and LLM Integration for Explainable AI

Skills

AI / NLP	Transformers, Hugging Face, LangChain, LangGraph, API Design
Data Analysis	Python, Pandas, NumPy, Visualization
Systems / DevOps	REST API, AWS, Docker, Kubernetes
Web Dev	React, JavaScript, HTML, CSS

Experience

Chunjae Education   *Jun. 2024 - Sep. 2025*
AI RESEARCH ENGINEER   *Digital Education Team*

- Developed PoC and MVP leveraging Knowledge Tracing, Graph Databases, and Generative AI.
- Developed an AI-based Korean CSAT passage/question generation API service by fine-tuning GPT and benchmarking LLMs (GPT, Claude, Gemini, DeepSeek), and built agentic workflows to automate and orchestrate the end-to-end generation process.
- Built a Math courseware MVP by integrating IRT with Deep Knowledge Tracing and graph database learner modeling.

Korean Educational Development Institute   *Jun. 2022 - Feb. 2023*
RESEARCHER   *Center for Educational Statistics*

- Reviewed the National School Violence Survey dataset and prepared related materials.

Teaching Experience

MetaCode
TEACHING

- Designed and instructed a 6-hour course on AI Agents and Data Analysis, including generative AI applications, no-code automation, VibeCoding, and agent development, building agents using LangChain.

Chunjae IT Education Center   *Nov. 2024 - Aug. 2025*
AI DEVELOPMENT MENTORING/TEACHING

- Certified NCS Instructor in IT Development, Artificial Intelligence, and IT Strategy & Planning.
- Delivered workshops on VibeCoding with Google Apps Script and Gemini for company employees and graduate students at Chinju National University of Education.
- Mentored project management trainees on knowledge map design, recommendation logic, math OCR with GPT step-by-step responses, and SEL chatbot development.
- Lectured project management trainees on Artificial Intelligence, Deep Learning, and personalized learning processes.
- Led a seminar for master's students in Educational Technology at Seoul National University on building teacher-assistant chatbots for personalized education using GraphDB and GraphRAG.
- Organized EdTech seminars on knowledge tracing and recommendation systems for employees, trainees, and external participants.

Projects

Automated arXiv AI & LLM Newsletter System *Jul. 2025 Sep. 2025*

PERSONAL

- Developed an automated system that crawls latest AI papers from arXiv, generates summaries and translations, and delivers them via email.
- Implemented a full automation pipeline using GitHub Actions, including crawling, summarization, translation, and mailing tasks.
- Provided a searchable web archive through GitHub Pages, utilizing open-source tools and APIs for efficiency and scalability.

Similarity-Based Chatbot Improvement Proposal *Jul. 2024 Aug. 2024*

MEMBER

- Proposed improvements for a similarity-based chatbot by experimenting with combinations of morphological analyzers and embedding models.
- Designed an ensemble model approach to enhance response accuracy.
- Added category classification capability to refine similarity search and improve overall chatbot reliability.

Korean Handwriting Recognition Web Application *Apr. 2024 Jun. 2024*

LEADER

- Built a character-level handwriting recognition model using ResNet, enhanced with additional layers, and deployed as a FastAPI API for real-time Hangul character recognition.)
- Deployed services on AWS EC2 with isolated environments via Docker Compose.

Undergraduate Research Mini-Thesis *Mar. 2021 Jun. 2021*

MEMBER

- "Impact of communication competencies in team-project based learning on self-efficacy and project satisfaction"

Honors & Awards

2024.8.	**Excellence Award,** Korea Foundation for Science and Creativity, 6th Educational Public Data Analysis and Utilization Contest
2021.12.	**Outstanding Award,** Ewha Womans University, Future Learning Design Contest – AI-integrated pedagogy
2021–2023	**Research Grants,** Ewha Womans University, Support for Educational Technology Research Club Activities

Certifications

2025.7.	**NCS Qualified Instructor,** Korean Skills Quality Authority, IT Development/Artificial Intelligence/IT Strategy & Planning
2025.7.	**Big Data Analysis Engineer,** Korea Data Agency
2025.2.	**AWS Certified AI Practitioner,** Amazon Web Services(AWS)
2024.9.	**Neo4j Graph Data Science Certification,** Neo4j
2024.6.	**SQL Developer,** Korea Data Agency
2024.8.	**TEPS,** Seoul National University Foundation, Score : 354