JI MIN LEE

Los Angeles, CA | (213) 803-9550

Software Engineer | Full-Stack & Applied AI

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EDUCATION

UNIVERSITY OF SOUTHERN CALIFORNIA   **Los Angeles, CA**
- Master of Science in Computer Science (AI*)*   *Aug 2025 – May 2027*

GACHON UNIVERSITY   **Seongnam, Korea**
- Bachelor of Engineering in Software Engineering, *Cum Laude*   *Sep 2018 – Feb 2024*

PROFESSIONAL EXPERIENCE

University of Southern California, Interaction Lab (Prof. Maja Matarić)   **Los Angeles, CA**
Web Team Lead (NIH R01 Funded Project)   *Jan 2026 – Present*
- Leading full-stack development of a secure NIH-funded research platform on AWS with Next.js and TypeScript, establishing code review standards and sprint workflows for a cross-functional team
- Translating study requirements into backend schemas and API contracts for longitudinal workflows and robot integration
- Implementing an LLM-assisted reflection module to personalize therapeutic content within study workflows
- Integrating web interfaces with socially assistive robots (Blossom) via AWS IoT Core (MQTT) for low-latency bidirectional communication

EMRO – Korea's #1 AI-powered supply-chain software provider   **Seoul, Korea**
Full-Stack Engineer, AI Business Division   *Sep 2023 – Jun 2025*
- Launched "Quotation Doctor," an internal AI platform enabling Hyundai Motor Group procurement teams to search historical quotation data and surface price benchmarks and purchase history
- Engineered scalable REST APIs using Java/Spring with MySQL/PostgreSQL to power validation, analytics, and monitoring workflows
- Developed interactive dashboards in JavaScript (HTML/CSS) to visualize validation outcomes and operational metrics
- Integrated a FastText-based similarity service (Python/Flask), validating 100K+ quotes/month and reducing page load time from 10s to under 2s
- Standardized CI/CD across Azure and on-prem environments (Jenkins, Docker) with automated health checks and rollback mechanisms

PROJECTS

Visurai – AI-powered visual storytelling assistant for dyslexic, ADHD, and visual learners   *Oct 2025*
Awards: 1st Place (Context Engineering), Software Engineering Award [link]
USC Good Vibes Only Buildathon (LA Tech Week by a16z)
- Built real-time FastAPI backend converting text into visual storyboards & narration; streamed incremental results via SSE
- Designed an async multi-stage pipeline with concurrency control for slow generative workloads

Proact0 – Multi-agent LLM pipeline for AI Influencers (*AI Agent Developer)*   *May 2025 – Nov 2025*
- Architected a multi-agent pipeline using LangGraph to generate structured JSON storyboards for image generation; cut JSON errors ~30% via schema-constrained prompting and validation

RESEARCH EXPERIENCE

University of Southern California, AI for Health Lab (Prof. Ruishan Liu)   **Los Angeles, CA**
Graduate Research Intern   *Sep 2025 – Present*
- Developed a cold-start CAT pipeline integrating LLM-based simulation and IRT calibration
- Implemented evaluation tooling for CAT simulations (batch runs, metrics logging, reproducibility)
- Co-authored a paper on synthetically calibrated IRT item banks for CAT (submitted to ACL Rolling Review, ARR)

SKILLS

Languages: TypeScript, JavaScript, Python, Java
Frameworks: React, Next.js, Spring, FastAPI, Flask
Cloud & DevOps: AWS (Amplify, IoT Core, DynamoDB), Docker, Jenkins, Azure
Data/AI: MySQL, PostgreSQL, PyTorch, LangGraph

ADDITIONAL INFORMATION

Republic of Korea Army | Sergeant (Squad Leader)   *Sep 2019 – Mar 2021*
- Completed mandatory service with honorable discharge; led a squad for 6 months following Signal School training