

Sumin Im

ssumuss@khu.ac.kr |  ssum21 |  ssum21 |  Portfolio

EDUCATION

- **Kyung Hee University** Mar 2021 – Present (Expected: Aug 2026)
Bachelor of Science in Computer Engineering, GPA: 4.27/4.5 Seoul, Republic of Korea
- **Chungnam Science High School** Mar 2018 – Feb 2021
Gongju, Republic of Korea

EXPERIENCE

- **Mobile Intelligence & Interaction Lab** Dec 2025 – Feb 2026
Undergraduate Student Researcher KAIST (Prof. Sung-Ju Lee)
 - Investigated why in-domain examples outperform out-of-domain in Health-LLM predictions
 - Applied Self-Certainty and Test-Time adaptation for robust and interpretable health predictions
- **LinkedSpaces**  Jun 2025 - Aug 2025
Software Engineering Intern Silicon Valley, CA, USA 
 - Built AI-powered photo management system with semantic search using Swift
 - Developed POI ranking engine and conversational agent, improving user engagement by 40%
- **Automobile Network Lab** Mar 2024 – Jun 2025
Undergraduate Student Researcher Kyung Hee Univ. (Prof. Haneul Ko)
 - Conducted O-RAN architecture research and ns-O-RAN simulation for handover optimization
 - Developed ML-based handover prediction model using RSRP/SINR features, reducing ping-pong effects
- **Open Source Contribution Academy** Sep 2024 – Dec 2025
AI/ML Mentee – Hugging Face, O-RAN Project Contributor Ministry of Science and ICT
 - Contributing to Hugging Face Transformers documentation; built Korean language evaluation benchmarks

PATENTS

- **Real-Time QR Code Threat Detection System and Method Using Context-Based On-Device AI** 2026
Korean Patent Application No. PATENT-2026-0050051 (Filed: Mar 2026, Pending)
- **On-Device AI-Based Voice Impersonation Real-Time Detection System and Method** 2026
Korean Patent Application No. PATENT-2026-0050071 (Filed: Mar 2026, Pending)

PUBLICATIONS

- [1] Sumin Im (2025). **Improving Equity in Public Sports Facility Accessibility Using K-means-based Adaptive Gaussian 2SFCA and Multi-Objective Greedy Optimization**. In *Proc. Korean Society for Geospatial Information Science*
- [2] Sumin Im, et al. (2024). **O-RAN and ns-O-RAN: A Study on Architecture and Interface Analysis**. In *Korean Institute of Information Scientists and Engineers*

HONORS AND AWARDS

- **AI MCP Hackathon Season 2 @ President Award, National Information Society Agency** Nov 2025
Ministry of Science and ICT & National Information Society Agency (NIA)
 - **2nd place out of 47 teams (top 4%)**; AI video-to-music service using Model Context Protocol
- **UNI-DTHON @ Grand Prize** Nov 2024
National Software University Hackathon
 - **1st place among 140 participants (top 3%)** from 5 universities nationwide; led flutter-based foreigner real estate solution development
- **Wanted x Kyung Hee Prompton @ Grand Prize** Nov 2024
Prompt Engineering Competition
 - **1st place among 50 participants (top 6%)**; developed innovative LLM prompting strategies for education and automation

- **KHU'DATA DATATHON @ Grand Prize** Nov 2025
KHUDA & Lovable, Kyung Hee University
◦ **1st place out of 11 teams (top 9%)**; built *Re:Zip*, a data-driven housing platform with CPTED-based route scoring
- **KHUTHON @ Excellence Award** May 2025
Kyung Hee University AI Hackathon
◦ **5th place out of 48 teams (top 10%)**; Developed "Pruning," an AI-driven agricultural optimization platform with ML inference and FastAPI
- **AI_TOP_100 @ Finalist** Nov 2025
Kakao Impact Foundation & Brain Impact
◦ **Top 100 out of 3,000 participants nationwide** in an AI problem-solving competition
- **AWS x Codetree Programming Contest @ Finalist** May 2025
Algorithm Competition
◦ Top 100 nationwide in algorithmic problem-solving
- **Kyung Hee University Valley Start-Up @ Excellence Award** Aug 2024
LINC 3.0 Student Entrepreneurship
◦ Awarded KRW 2.5M funding for rental fraud prevention platform; recognized as outstanding project

RESEARCH PROJECTS

- **Personalized Health-LLM via Test-Time In-Context Learning** Dec 2025 – Present
Python, PyTorch, LLM API (GPT), MOMENT, Sleep-EDF [GitHub]
◦ Developing metadata-guided similar user matching using Gower distance for demographic-aware personalization
- **Ko-AgentBench: Korean AI Agent Evaluation Framework** Aug 2025 – Dec 2025
Python, LangChain, API Integration [GitHub]
◦ Built benchmark evaluating tool-use and reasoning of Korean LLMs; integrated Naver/Kakao APIs
- **AI-based Conditional Handover Optimization in 6G O-RAN** Mar 2024 – Sep 2024
Python, TensorFlow, NS-3, LSTM [Paper]
◦ Simulated O-RAN handover with NS-3; achieved 14% higher success rate via AI-based xApp optimization
- **Federated Learning-based Fraud Detection with Caching Strategy** Mar 2025 – Jun 2025
TensorFlow, gRPC, Docker Kyung Hee Univ. (Prof. Eui-Nam Huh)
◦ Designed VFL system with caching and feature sparsification; achieved 100× lower comm. cost, AUC 0.74
- **BalJach: Self-living Preparation App** Jan 2025 – Present
Flutter, Firebase, Google Cloud
◦ Published Play Store app for rental fraud prevention with deposit verification and room inspection features

SCHOLARSHIPS

- National Science & Technology Scholarship:** Full-tuition for outstanding STEM students (2025–2026)
- Donggyo Human Talent Award:** **One of 20 students selected nationwide** for outstanding contributions (Fall 2025)
- Academic Excellence Scholarship:** **GPA 4.43/4.50** Kyung Hee University (Fall 2024)
- Korea Land Information Society Scholarship:** Excellence in IT research (Fall 2024)
- Academic Excellence Scholarship:** **GPA 4.15/4.50** Kyung Hee University (Spring 2024)

LEADERSHIP EXPERIENCE

- **Upstage AI Ambassador** Mar 2026 – Present
Upstage Inc. (**21 people selected nationwide**)
◦ Prototyping AI services using Upstage APIs (Document Parse, Embeddings, Solar Pro 2)
- **KANANA 429 – AI Ambassador** Mar 2026 – Present
Kakao AI Ambassador Program (**100 creators selected nationwide**)
◦ Engaging with Kakao's AI vision and multimodal services; providing feedback on Kanana AI platform
- **KT Digital Volunteer Program** Jun 2025 – Nov 2025
AI/Math Mentor
◦ Taught AI concepts and mathematics to underprivileged students in Incheon area
- **KHLUG – Kyung Hee University Linux User Group** Mar 2024 – Feb 2025
External Relations Officer
◦ Organized tech seminars and workshops, secured sponsorships from tech companies
- **EBS 1318 On-Coaching / SK Hynix HIneststein Mentoring** May 2024 – Feb 2025
Educational & Youth STEM Mentor
◦ Provided one-on-one online coaching and STEM mentorship to middle/high school students
- **Industrial Linkage Festival** Aug 2024
Global Capstone Design Participant (LINC 3.0)
◦ Completed industry immersion program, proposing solutions for Seoul-based industrial challenges