Sangmin Hwang

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Education

KAIST, M.S. in Artificial Intelligence — Mar 2026 – Present

Korea University, B.S. in Computer Science and Engineering *(GPA: 4.4/4.5)* — Mar 2019 – Feb 2026

University of Washington, Exchange Program *(GPA: 4.0/4.0)* — Sep 2024 – Dec 2024

Experience

Research Assistant, *OSI Lab* — June 2025 - Present
(Advisor: Prof. Seyoung Yun)

- Research Interest: Efficient AI, Agents, AI Alignment

Machine Learning Engineer Intern, *Daangn Market Inc.* – Seoul — Feb 2025 - May 2025

- Worked on improving the performance of a search query typo correction model
- Designed a deep learning based typo correction model, achieving a 50% improvement in correction coverage
- Synthesized and curated a large-scale typo correction dataset (3M entries) from real-world user search logs

Machine Learning Engineer Intern, *Corca Inc.* – Seoul — Mar 2024 - Jul 2024

- Developed a LLM-based chatbot for retrieving and recommending fashion items
- Implemented an evaluation pipeline for a conversational recommender system leveraging LLM-based simulation

Publications

LLM-as-a-Tutor: Policy-Aware Prompt Adaptation for Non-Verifiable RL — *Preprint Under Review*
Yujin Kim, Namgyu Ho*, **Sangmin Hwang***, Joonkee Kim, Yongjin Yang, Sangmin Bae, Seungone Kim, Jaehun Jung, Se-Young Yun, Hwanjun Song*

- Proposed a policy-aware prompt adaptation framework for instruction-following RL that leverages an LLM to detect non-discriminative prompts from policy rollouts and scale prompt difficulty

An Analysis of how social hierarchy impacts decision-making in LLM agent collaboration (KSDIM 2025) — [Paper link]
*Jihwan Oh, **Sangmin Hwang**, Sehyeok Kang, Seyoung Yun*

- Investigated how assigning hierarchical roles to LLM agents influences their decision-making processes in multi-LLM debate

Projects

Software Engineer Agent — [Github link]

- Developed an LLM-based agent that autonomously codes programs based on user prompts, utilizing tools such as code writer, code appender, code reader, and terminal.
- Successfully created a simple to-do webpage consisting of multiple files using the Reasoning and Acting (ReAct) approach. *(Technologies: Python, OpenAI API)*

Leveraging Text-Augmentation Methods in Korean Text Classification — [Github link]

- Investigated effective text data augmentation methodologies for topic classification in low-resource settings
- Analyzed the advantages and disadvantages of three different text augmentation methods: Rule-based, Backtranslation, and Masked Language Modeling *(Technologies: Python, Pytorch, Huggingface)*

Enhanced Course Search System — [Github link]

- Developed a course search system to retrieve courses that best match user queries, integrating syllabus and course reviews using Reciprocal Rank Fusion (RRF).
- Crawled and preprocessed course data and reviews through automated scripts using Selenium for enhanced

search accuracy and relevance. *(Technologies: Python, Huggingface, Selenium)*

Awards and Scholarships

Qwen SKYST Datathon, 1st Place Award — Jul 2025

Korea University Informatics College Datathon, 2nd Place Award — Nov 2023

ROKAF Innovative Idea Hackthon, 4th Place Award — Nov 2022

ROKAF Cyber Warrior Contest, 2nd Place Award — Jul 2022

Korea Olympiad in Informatics (KOI), 3rd Place Award — Oct 2018

Dean's List — Fall 2023
Honored for achieving 4.5/4.5 GPA

Jeonghun Foundation Scholarship — Mar 2023 - Aug 2024
Tuition Scholarship awarded for academic excellence

Technical Qualifications

- **Languages**: Python, SQL, JAVA, C, Javascript, HTML/CSS
- **Tools**: Pytorch, Huggingface, scikit-learn, MySQL, Git, Linux/Unix Shell, Node.JS, React, Android Studio

Extracurricular Activities

Vice President in Korea University AI club, *AIKU* — Fall 2023

- Organized and developed 3 datathons, including creating and curating challenges
- Led study sessions on deep learning and natural language processing for over 40 members
- Arranged career development seminars for Korea University students by inviting professors and industry experts

KAIST Immersion Camp — Winter 2020

- Participated in 4-week immersive SW camp, developing web and mobile applications
- Developed *Deliversity: Delivery app for University students*, selected as an outstanding project

Language proficiencies

Korean: Native

English: Professional working proficiency (IELTS 7.0)