Kyochul Jang

Research Interests: GUI Agent, On-Device AI, sVLAM, Embodied AI, and AI Safety



Education

Purdue University

Bachelor of Science in Computer Science (CGPA: 3.71 / 4.00)

Graduation: Fall 2023

West Lafayette, Indiana

Seoul National University Graduation: Spring 2026

Master of Science in Artificial Intelligence (CGPA: 4.18 / 4.30)

Seoul, Korea

Publications

- i) <u>Jang, K.</u>, Lee, D., Kim, K., Heo, D., Lee, T., Kim, W., Suh, B. (2025). DICE-BENCH: Evaluating the Tool-Use Capabilities of Large Language Models in Multi-Round, Multi-Party Dialogues. *ACL 2025 Findings*. https://snuhcc.github.io/DICE-Bench/
- ii) Lee, D., Song, M., Kim, C., Jang, K., Kim, H., Kang, J. (2025). ComPLUG: Efficient Multilingual Medical Reasoning via Compressed Pivot Language-guided Generation. AAAI 2025 (Under Review).
- iii) Lee, J., Jang, K., Sparkling, A. E., Kang, K. (2025). Large Language Model-based Construction Site Management for Severe Weather Preparedness. *ASCE's Journal of Construction Engineering and Management*. https://www.researchgate.net/publication/386108841
- iv) Kim, Y., Jang, K., Song, H., Shin, M., Suh, B. (2025). CodeVoyager: An Interactive Tool for Rapid Code Comprehension through LLM-Assisted Graph Navigation. *UIST 2025 Poster (Accepted) & IUI 2026* (WIP).
- v) Song, H., Shin, M., Kim, Y., Jang, K., Choi, J., Jung, H., Suh, B. (2025). AltAuthor: A Context-Aware Alt Text Authoring Tool with Image Classification and LMM-Powered Accessibility Compliance. *IUI 2025 Posters and Demos*. https://dl.acm.org/doi/10.1145/3708557.3716366
- vi) Park, K., Kim, J., Song, H., Jang, K., Suh, B. (2025). OASIS: Enhancing Debate Quality and Mitigating Polarization through Al-Assisted Argumentation. *UIST 2026*. (Under Review).
- vii) Song, H., Shin, M., Choi, J., Park, Y., <u>Jang, K.</u>, Suh, B. (2025). AltUs: Generating Alt Text to Improve E-Commerce Accessibility Through Blind and Low Vision User Participation. *UIST 2026*. (Under Review).
- viii) Lee, T., Yoon, C., <u>Jang, K.</u>, Lee, D., Song, M., Kim, H., Kang, J. (2025). ETHIC: Evaluating Large Language Models on Long-Context Tasks with High Information Coverage. *NAACL* 2025. https://arxiv.org/abs/2410.16848
- ix) Kim, H., Kim, C., Lee, H., Jang, K., Lee, J., Lee, K., Kim, G., Kang, J. (2024). KU-DMIS at EHRSQL 2024: Generating SQL query via question templatization in EHR. NAACL 2024. https://aclanthology.org/2024.clinicalnlp-1.64
- x) Oh, D., Kang, K., Seo, S., Xiao, J., <u>Jang, K.</u>, Kim, K., Park, H., Won, J. (2023). Low-Cost Object Detection Models for Traffic Control Devices through Domain Adaption of Geographical Regions. *Remote Sensing, MDPI*. https://doi.org/10.3390/rs15102584

Awards and Honors

SKT AI Fellow Scholarship 06/2025 - 11/2025 Grand Prize (2nd Place), AI Demo Competition 06/2025

1st Prize (LG Almers / LG Al Hackathon) 01/2024 – 04/2024

Dean's List 08/2021 - 12/2023

Semester Honors 01/2021 - 12/2023

Patents

LG Management Development Institute. <u>Jang, K.</u>, Choi, J., Jang, K., Choi, S., Hong, Y. (2025). Predictive System, Control Method thereof, and Learning Method of Predictive System. Korean Patent Application No. 10-2024-0109936. Publication No. 10-2024-0176815. https://doi.org/10.8080/1020240176815

Work Experience

SK Telecom

SKT Al Fellow

Hybrid

- Developing On-Device mobile GUI agents capable of executing user instructions through interaction with smartphone interfaces.
- Collected and preprocessed large-scale smartphone screenshot data to train and post-train a Small Vision-Language-Action Model (sVLAM) for robust GUI agent.

Naver - Naver Boostcamp / SSAFY - Samsung

07/2024 - Present

AI Tech Teaching Assistant - Generation for NLP

Remote

- Develop and review lecture content, including videos, assignments, and guides, while designing course objectives and evaluation criteria for the AI Tech NLP track.
- Create and manage leaderboard-style competitions, including setting up datasets, evaluation metrics, and tutorials, and ensuring smooth operation of the stages.ai platform, while organizing educational sessions and seminars for students.

Department of Computer Science and Engineering, Seoul National University

05/2025 - Present

Gradaute Teaching Assistant

Seoul, Korea

- Assisted students in the Artificial Intelligence Seminar and Data Structures and Algorithms courses with hands-on practice and assignment development.
- Facilitated the Artificial Intelligence Seminar by coordinating logistics, ensuring smooth lectures by invited speakers, and providing a supportive learning environment for students.

Samsung Electronics DX

06/2023 - 08/2023

Software Engineering Intern

Suwon, Korea

- Worked as a SDE Intern at Samsung Electronics DX Mobile Experience team, developing automated programs leveraging AI technologies.
- Designed and implemented an automated tool for next-generation Galaxy series products, leveraging Geekbench to identify scenario phases in Mobile AP chips through power and voltage variance analysis.

Department of Computer Science, Purdue University

08/2022 - 12/2023

Undergraduate Teaching Assistant - CS 17700

West Lafayette, Indiana

- Created customized Python assignments for students based on their level of proficiency and course requirements, ensuring effective learning outcomes.
- Instructed course materials and provided guidance to students in lab sessions while also assisting the Graduate Teaching Assistant in supervising and grading student work.

Leadership Experience

Purdue Korean Association (PKA)

08/2021 - 08/2023

Recruiting Team Leader

West Lafayette, Indiana

• Led a team of 10 members, the largest in the association, and secured 7,000 club operation fees from prominent companies such as Samsung Electronics, LG, and SK Innovation.

Republic of Korea Army

Squad Leader

08/2018 - 03/2020

Seoul, Korea

• Served as a squad leader of a radio operation squad in the military at Seoul Capital Defense Command.

- converted to a squad reader of a radio operation squad in the immedity at second capital Bereinse of
- Worked as a translator of Chinese, English, and Korean at Army Headquarters.

Project Experience

Mobile GUI Agent Development | ADB, Huggingface TRL, UIAutomator2, Google AI Edge

05/2025 - 11/2025

• Designed and implemented a Mobile GUI Agent for smartphone automation by post-training SVLAM and deploying it On-Device. | Website: https://devocean.sk.com/community/detail.do?ID=167400

Purdue Korean Association Website Development | Typescript, React, Figma, Next.js, Nest.js

08/2023 - 05/2024

• Build a renewal Purdue Korean Association Official website and contribute to front-end and back-end tasks using Next.js (React.js) and Nest.js while utilizing Figma for UI/UX design to enhance user experience. | Website: https://purdueka.org/

Portfolio Website | React.js, HTML, Netlify, Tailwind, Firebase

08/2022 - Present

 Created and deployed my portfolio website from scratch using Firebase, React.js, CSS, and HTML without relying on pre-existing templates. | Website: https://www.kyochul.com/

Invited Talks

Code Understanding Tool using React-Flow: Code Voyager | SNU Al Graduate School

06/2025

Host: SNU GSAI

LLM Function Calling and Agent | Naver Boostcamp

11/2024

Host: Naver Boostcamp

Proficiency in Skills

Languages: English (Full Professional Proficiency), Chinese (Full Professional Proficiency), Korean (Native)

Programming Languages: Python, Huggingface, Pytorch, Java, C, C++, R, JavaScript (React.js), LaTeX, CSS, HTML

Certification: HSK (Level 6), Craftsman Information Processing