Kyochul Jang

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Education

Purdue University Graduation: Fall 2023 Bachelor of Science in Computer Science (CGPA: 3.71 / 4.00) West Lafavette, Indiana

Seoul National University Graduation: Spring 2026

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

Publications

- i) Jang, K., 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. https://github.com/snuhcc/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. EMNLP 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., Suh, B. (2025). CodeVoyager: An Interactive Tool for Rapid Code Comprehension through LLM-Assisted Graph Navigation. UIST Poster & CHI 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. CHI 2026. (Under Review).
- vii) Song, H., Shin, M., Choi, J., Park, Y., Jang, K., Suh, B. (2025). AltUs: Generating Alt Text to Improve E-Commerce Accessibility Through Blind and Low Vision User Participation. CHI 2026 (WIP). (Under Review).
- viii) Lee, T., Yoon, C., Jang, K., 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., Jang, K., 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 Fellowship 7th 06/2025 - 11/2025

Research Award, IPAI, Seoul National University

06/2025

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

Research Experience

HCC Lab - Seoul National University

07/2024 - Present

Graduate Researcher

Seoul. Korea

- Developing cognitively inspired AI systems that emulate human conceptual planning and language generation, and applying them to practical, user-centric domains such as computer use agents and embodied agents.
- Exploring how AI-human interaction can enhance human life through innovative and practical solutions.

DMIS Lab - Korea University

01/2024 - 06/2024

Al Researcher

Seoul, Korea

- Participated in the "Reliable Text-to-SQL on Electronic Health Records" challenge to develop a language model that generates queries from user instructions. My responsibilities included analyzing and identifying trends in unanswerable queries to enhance model accuracy and reliability. (NAACL)
- Collaborated on the ETHIC benchmark project to assess large language models' long-context processing capabilities across books, debates, medicine, and law, introducing the Information Coverage metric to evaluate their performance. (ArXiv)

SIMPLE Lab - Purdue University

10/2022 - 12/2023

Undergraduate Research Assistant / Undergraduate Researcher

West Lafayette, Indiana

- Finetuned the cutting-edge Large Language Model (LLM) by leveraging the ALPACA dataset, built on the foundation of the LLaMA2 model, with the strategic application of LoRA and 4-bit Quantization for enhanced performance and computational efficiency using Huggingface.
- Analyzed over 100 models utilizing YOLOv5 in the intersection of computer vision and civil engineering, focusing on Transfer Learning and Domain Adaptation. This extensive study led to the publication of a co-authored journal paper. (Remote Sensing)
- Developed a program utilizing the YOLOv5 Object Detection model to automatically delete videos featuring more than two individuals from a dataset of 25,000 videos totaling 1.4 TB and to apply automatic blurring on human faces for privacy enhancement using the DeepFace model.

Work Experience

Naver - Naver Boostcamp / SSAFY - Samsung

07/2024 - Present

Al 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.

Samsung Electronics DX

06/2023 - 08/2023

Software Engineering Intern

Suwon, Korea

- Developed an automated program utilizing a probabilistic methodology to identify mobile AP program performance segments in Galaxy series products.
- Conducted in-depth analysis of current and voltage usage in application processes utilizing Geekbench5.

Department of Computer Science

Undergraduate Teaching Assistant - CS 17700

08/2022 - 12/2023 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.

Independent 05/2022 - 08/2022

Web Development Tutor

Seoul, Korea

- Provided personalized web development tutoring to two design students, guiding them through creating and deploying their websites from scratch.
- Designed a 12-week course about web development. Course Website: officerchul.github.io/webDev101

Purdue University Residences

08/2021 - 05/2022

Student Office Staff

West Lafayette, Indiana

- Served as a front-line representative of University Residences within the First Street Towers residence hall.
- Learned how to treat customers in various situations and how the Residence system works at Purdue University.

Bridging Group Korea

06/2020 - 07/2020

Moderation Intern

Seoul, Korea

- Successfully managed a diverse group of 500 international buyers and sellers, utilizing fluency in Korean, English, and Chinese, while moderating SPP2020, a high-profile event sponsored by the Seoul Business Agency.
- Acquired valuable customer service experience and a comprehensive understanding of the Residence system at Purdue University through various situations.

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 collaborated with Korean companies to recruit talented individuals worldwide.
- Secured club operation fees through successful donation requests from prominent companies such as Samsung Electronics, LG, and SK Innovation, resulting in \$ 7,000 raised for the semester.

Republic of Korea Army

08/2018 - 03/2020

Squad Leader

Seoul, Korea

- Served as a squad leader of a radio operation squad in the military at Capital Defense Command.
- Worked as a translator of Chinese, English, and Korean at Army Headquarters.

Project Experience

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

08/2023 - 05/2024

- Build a renewal Purdue Korean Association Official Website, independently creating a custom solution without relying on any Content Management System (CMS).
- Contribute to front-end and back-end development tasks using Next.js (React.js) and Nest.js while utilizing Figma for UI/UX design to enhance user experience. | Website: https://purdueka.org/ (WIP)

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: www.kyochuljang.com (WIP)

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