

Wongyu Kim

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RESEARCH INTEREST

My research focuses on building domain-specialized AI agents that reliably perform complex tasks in real-world settings. I am particularly interested in the core modules that make such agents work — harness engineering, orchestration, memory, retrieval, and multi-agent — and in how these components can be integrated into a coherent system. Recently, I have begun working on physical foundation models and the engineering systems around them. By combining my prior experience in agentic systems with this work on physical models, I aim to build an agentic robot framework that grounds these capabilities in physical interaction.

EDUCATION

09/2020 - 08/2022 M.S. in Artificial Intelligence at Yonsei University (GPA: 4.09/4.3)
Advisor: Prof. Kyong-Ho Lee

03/2016 - 08/2020 B.S. in Computer Science and Engineering at Kyunghee University (GPA: 3.6/4.3)

EXPERIENCE

NC AI 02/2025 - Present
Chatbot Service Division
Researcher & Engineer

NC 09/2022 - 01/2025
Information Retrieval Division
Researcher & Engineer

KIST Europe 02/2019 - 07/2019
Research Intern

PUBLICATIONS

Preprints & In Progress

[P1] Robust Memory in Multi-Agent
Wongyu Kim
In Progress (2027)

Conference Papers

[C3] [Persona expansion with commonsense knowledge for diverse and consistent response generation](#)
Donghyun Kim, Youbin Ahn, **Wongyu Kim**, Chanhee Lee, Kyungchan Lee, Kyong-Ho Lee, Jeonguk Kim, Donghoon Shin, Yeonsoo Lee
EACL 2023

[C2] [Concept-based Persona Expansion for Improving Diversity of Persona-Grounded Dialogue](#)
Donghyun Kim, Youbin Ahn, Chanhee Lee, **Wongyu Kim**, Kyong-Ho Lee, Donghoon Shin, Yeonsoo Lee
EACL 2023

[C1] [Emp-RFT: Empathetic response generation via recognizing feature transitions between utterances](#)
Wongyu Kim, Youbin Ahn, Donghyun Kim, Kyong-Ho Lee
NAACL 2022

Workshop Papers

[W1] [Let Multimodal Embedders Learn When to Augment Query via Adaptive Query Augmentation](#)
Wongyu Kim, Hochang Lee, Sanghak Lee, Yoonsung Kim, Jaehyun Park
MMGenSR, CIKM 2025 (2025)

Journal Papers

[J1] [Optimizing training data for persona-grounded dialogue via Synthetic Label Augmentation](#)
Chanhee Lee, Donghyun Kim, **Wongyu Kim**, Kyungchan Lee, Youbin Ahn, Kyong-Ho Lee, Donghoon Shin, Yeonsoo Lee
ESWA 2025

PROJECTS

Memory Technology for Agentic Harness across Customer Service Agents (NCCX) 04/2026 - Present
at NC AI

Researcher & Engineer

Related Publications: [P1]

Project: NCCX (Internal Service)

Multimodal Embedding Model for NCER User Problem-solving Pipelines 03/2025 - Present
at NC AI

Researcher & Engineer

State-of-the-art-level Multimodal Embedding Model on KMMEB and KoViDoRe(v2)

Related Publications: [W1]

Dense Passage Retrieval (DPR) Text Embedding Model for Conversational Game Chatbots and Agents (NCER) 09/2024 - Present
at NC AI

Researcher & Engineer

State-of-the-art-level Text Embedding Model on MTEB(kor, v1) and MTEB(kor, v2)

Project: [NCER](#)

Sparse Passage Retrieval (SPR) Text Embedding Model for In-house Chatbot 01/2024 - 09/2024
at NC

Researcher & Engineer

Clustering Model for AI-driven Private Banking 09/2022 - 06/2023
at NC

Researcher & Engineer

Improving Dialogue Quality via Persona Expansion and Combination using Knowledge Graphs 07/2021 - 12/2021
with NC

Project Member

Related Publications: [C3, J1]

with NC

Project Member

Related Publications: [C2]

HONORS & AWARDS

Travel Grant	Google East Asia Student Travel Grants, 2022, NAACL & Google
Scholarship	Academic excellence (Undergraduate GPA honors), Spring 2017 & Fall 2019, Kyunghee University
1st Prize	LG Display & Yonsei University AI Competition (Few-shot Incremental Learning), 2022, Yonsei University
3rd Prize	KHU Hackathon sponsored by Naver D2 (Automatic Video Editor), 2019, Kyunghee University
2nd Prize	KHU Hackathon sponsored by Naver D2 (Job Recommender System), 2018, Kyunghee University