

Jeonghwan Kim

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Research Interests

Natural Language Processing (NLP), Multimodal Large Language Models (MLLMs), Deep Learning

Vision-Language Models (VLMs), Retrieval-Augmented Generation (RAG), Multimodal Representation Learning, Multi-Hop/Open-Domain Question Answering (QA), Numeracy in LLMs, and Model Interpretability and Robustness.

Education

University of Illinois at Urbana-Champaign (UIUC)

Ph.D. Candidate in Computer Science (Advisor: [Heng Ji](#))

Champaign, USA
Aug 2023 – Present

KAIST

M.S. in Computer Science (Advisor: [Sung-Hyon Myaeng](#))
Thesis Committee: Sung-Hyon Myaeng, Alice Oh, Junho Lim
GPA: 4.13/4.30

Daejeon, South Korea
Feb 2022

Handong Global University

B.S. in Computer Science & Electrical Eng. (Advisor: [Heeyoul Henry Choi](#))
Magna Cum Laude (Overall GPA: 4.11/4.5 | Major GPA: 4.21/4.5)

Pohang, South Korea
Feb 2020

Experience

Meta — Research Scientist Intern (Part-time Student Researcher)

Working on Retrieval-Augmented Generation (RAG) on multimodal LLMs.

Redmond, USA
May 2025 – Oct 2025

Amazon — Applied Scientist Intern

Developed a generalizable multimodal encoder for geospatial applications.

Bellevue, USA
May 2024 – Aug 2024

UIUC — Research Assistant

Research on Multimodal LLMs and reasoning.

Champaign, USA
Aug 2023 – Present

KAIST — Researcher

Developed graph and RAG-based language modeling approaches for QA.

Daejeon, Korea
Mar 2022 – Jul 2023

Republic of Korea Marine Corps — Sergeant (Honorably Discharged)

Served as a rifleman and interpreter for the ROK-US Combined Marine Command.

Pohang, Korea
Mar 2015 – Dec 2016

Publications

‘*’ indicates equal contribution

[1] **PixaR: Pixel-Grounded Retrieval for Knowledgeable Large Multimodal Models**

Jeonghwan Kim, Renjie Tao (Under Review), Sanat Sharma, Jiaqi Wang, Kai Sun, Zhaojiang Lin, Seungwhan Moon, Lambert Mathias, Anuj Kumar, Heng Ji, Xin Luna Dong

Preprint (Under Review)

[2] **PARTONOMY: Large Multimodal Models with Part-Level Visual Understanding**

Jeonghwan Kim*, Ansel Blume*, Hyeonjeong Ha, Elen Chatikyan, Xiaomeng Jin, Khanh Duy Nguyen, Nanyun Peng, Kai-Wei Chang, Derek Hoiem and Heng Ji

NeurIPS 2025 (Spotlight)

[3] **Infogent: An Agent-based Framework for Web Information Aggregation**

Jeonghwan Kim*, Revanth Gangi Reddy*, Sagnik Mukherjee*, Zhenhailong Wang*, Dilek Hakkani-Tur, Heng Ji

- [4] **SYNTHIA: Novel Concept Design with Affordance Composition**
Hyeonjeong Ha, Xiaomeng Jin, Jeonghwan Kim, Jiateng Liu, Zhenhailong Wang, Khanh Duy Nguyen, Ansel Blume, Nanyun Peng, Kai-Wei Chang, Heng Ji

ACL 2025
- [5] **Search and Detect: Training-Free Long Tail Object Detection via Web-Image Retrieval**
Mankeerat Sidhu, Hetarth Chopra, Ansel Blume, Jeonghwan Kim, Revanth Gangi Reddy, Heng Ji

CVPR 2025
- [6] **Aligning LLMs with Individual Preferences via Interaction**
Shujin Wu, May Fung, Cheng Qian, Jeonghwan Kim, Dilek Hakkani-Tur, Heng Ji

COLING 2025
- [7] **Finer: Investigating and Enhancing Fine-Grained Visual Concept Recognition in Large Vision Language Models**
Jeonghwan Kim, Heng Ji

EMNLP 2024
- [8] **Why So Gullible? Enhancing the Robustness of Retrieval-Augmented Models against Counterfactual Noise**
Giwon Hong, Jeonghwan Kim*, Junmo Kang*, Sung-Hyon Myaeng, Joyce Jiyoung Whang*

NAACL 2024, Findings
- [9] **FinePrompt: Unveiling the Role of Finetuned Inductive Bias on Compositional Reasoning in GPT-4**
Jeonghwan Kim, Giwon Hong*, Sung-Hyon Myaeng, Joyce Jiyoung Whang*

EMNLP 2023, Findings
- [10] **Graph-Induced Transformers for Efficient Multi-Hop Question Answering**
Giwon Hong, Jeonghwan Kim, Junmo Kang, Sung-Hyon Myaeng

EMNLP 2022
- [11] **Exploiting Numerical-Contextual Knowledge to Improve Numerical Reasoning in Question Answering**
Jeonghwan Kim, Junmo Kang, Kyung-min Kim, Giwon Hong, Sung-Hyon Myaeng

NAACL 2022, Findings
- [12] **Have You Seen That Number? Investigating Extrapolation in Question Answering Models**
Jeonghwan Kim, Giwon Hong, Kyung-min Kim, Junmo Kang, Sung-Hyon Myaeng

EMNLP 2021
- [13] **Leveraging Order-Free Tag Relations for Context-Aware Recommendation**
Junmo Kang, Jeonghwan Kim, Suwon Shin, Sung-Hyon Myaeng

EMNLP 2021
- [14] **Can You Distinguish Truthful from Fake Reviews? User Analysis and Assistance Tool for Fake Review Detection**
Jeonghwan Kim, Junmo Kang*, Suwon Shin*, Sung-Hyon Myaeng*

HCI+NLP Workshop, EACL 2021
- [15] **Maximizing Efficiency of Language Model Pre-training for Learning Representation**
Junmo Kang, Suwon Shin*, Jeonghwan Kim*, Jaeyoung Jo*, Sung-Hyon Myaeng*

KSC 2020
- [16] **Object Classification on Raw Radar Data Using Convolutional Neural Networks**
Heejae Han, Jeonghwan Kim, Junyoung Park, YuJin Lee, Hyunwoo Jo, Yonghyeon Park, Eric T Matson, Seongha Park

IEEE SAS 2019
- [17] **Towards the Development and Realization of an Undetectable Stealth UAV**
Jiyeon Oh, Daeun Choe, Chanhui Yun, Jeonghwan Kim, Michael Hopmeier

IEEE IRC 2019

Academic Services

Reviewer - EACL 2026, SEA@NeurIPS 2025, EMNLP 2025, ACL 2025, AAAI 2025, ACL 2024, NAACL 2024, EMNLP 2024, ACL 2023, EMNLP 2023

Projects

DARPA Environment-driven Conceptual Learning (ECOLE) <i>Funded by DARPA</i>	Aug 2023 – Present
DARPA In the Moment (ITM) <i>Funded by DARPA</i>	Aug 2023 – Present
Development of Expert Decision-making Support AI Development of AI technology for explainable expert decision-making. <i>Funded by the Korean Government (Ministry of Science and ICT)</i>	Apr 2022 – Jul 2022
Contextual-Numerical Embedding for Reasoning Development of context-number embedding for numerical reasoning in QA. <i>Funded by the Korean Government (Ministry of Science and ICT)</i>	Jul 2021 – Dec 2021
ExoBrain Development of Knowledge Evolutionary WiseQA Platform Technology. <i>Funded by the Korean Government (Ministry of Science and ICT)</i>	Apr 2020 – Jul 2023
Smart Interaction and Context Association Machine Learning for Context Association and Smart Interaction Suggestion. <i>Funded by the Korean Government (Ministry of Science and ICT)</i>	Apr 2020 – Mar 2021
AI-based National Online Petition System Development of AI-based national Online Petition System for citizen deliberation. <i>Funded by KAISTs Exploratory Research Program</i>	Apr 2021 – Dec 2021
Purdue University - IITP Capstone Raw radar data object detection and stealth UAV design. <i>Funded by the Korean Government (IITP)</i>	Aug 2018 – Dec 2018

Honors & Awards

- **2020:** Graduated with Honors in CSE, Magna Cum Laude (Handong Global University)
- **2020:** Finalist (Top 3), COMEUP2020 AI CHAMPIONSHIP (K-Startup)
- **2019:** Grand Prize, Capstone Graduation Project Festival (Handong Global University, CSEE)
- **2018:** Certificate of Merit, IITP Capstone 9 Program (Purdue University)
- **2018:** Finalist (Top 15), NAVER AI Hackathon (NAVER AI RUSH)
- **2017:** National Science and Technology Scholarship, Korea Student Aid Foundation (KOSAF)

Teaching

- **Aug 2020 – Jun 2021:** Teaching Assistant, Senior Data Science, Samsung SDS
- **Jun 2021 – Jul 2021:** Teaching Assistant, Text Mining, SKKU Global Business School
- **Mar 2021 – Dec 2021:** Teaching Assistant, Text Mining, KAIST
- **Mar 2019 – Jun 2019:** Teaching Assistant, Data Structures, Handong Global University

Technical Skills

Programming: Python, Pytorch, C, C++, Java, Dart

Frameworks: Pytorch, TensorFlow, Theano, Docker, Huggingface, OpenCV, Flutter, Firebase, DGL

Tools: SpaCy, NLTK, Seaborn, Matplotlib