# **Jeonghwan Kim**

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 ₲ Google Scholar

#### Research Interests \_\_\_\_\_

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

Large Vision-Language Models (VLMs), Retrieval-Augmented Generation (RAG), Representation Learning, Multi-Hop 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** Daejeon, South Korea

Feb 2022

M.S. in Computer Science (Advisor: Sung-Hyon Myaeng ☑)
Thesis Committee: Sung-Hyon Myaeng, Alice Oh, Junho Lim

GPA: 4.13/4.30

#### **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 Redmond, USA

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

May 2025 – Present

**Amazon — Applied Scientist Intern**Developed a generalizable multimodal encoder for geospatial applications.

Bellevue, USA May 2024 – Aug 2024

Champaign, USA

Research on Multimodal LLMs and reasoning.

**BLENDER Lab, UIUC — Research Assistant** 

Republic of Korea Marine Corps — Sergeant

Aug 2023 – Present

KAIST IR&NLP Lab — Research Associate

Daejeon, Korea Mar 2022 – Jul 2023

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

Pohang, Korea

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

Mar 2015 – Dec 2016

#### Publications \_

#### [1] Infogent: An Agent-based Framework for Web Information Aggregation

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

NAACL 2025, Findings

[2] Aligning LLMs with Individual Preferences via Interaction

Shujin Wu, May Fung, Cheng Qian, **Jeonghwan Kim**, Dilek Hakkani-Tur, Heng Ji

**COLING 2025** 

[3] Finer: Investigating and Enhancing Fine-Grained Visual Concept Recognition in Large Vision Language Models Jeonghwan Kim, Henq Ji

**EMNLP 2024** 

<sup>&#</sup>x27;\*' indicates equal contribution

[4] 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** [5] 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** [6] Graph-Induced Transformers for Efficient Multi-Hop Question Answering Giwon Hong, **Jeonghwan Kim**, Junmo Kang, Sung-Hyon Myaeng **EMNLP 2022** [7] 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** [8] 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** [9] Leveraging Order-Free Tag Relations for Context-Aware Recommendation Junmo Kang, **Jeonghwan Kim**, Suwon Shin, Sung-Hyon Myaeng **EMNLP 2021** [10] 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** [11] Maximizing Efficiency of Language Model Pre-training for Learning Representation Junmo Kang\*, Suwon Shin\*, **Jeonghwan Kim\***, Jaeyoung Jo\*, Sung-Hyon Myaeng **KSC 2020** [12] 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** [13] Towards the Development and Realization of an Undetectable Stealth UAV Jiyeon Oh, Daeun Choe, Chanhui Yun, **Jeonghwan Kim**, Michael Hopmeier **IEEE IRC 2019** Projects \_\_\_\_\_ **Development of Expert Decision-making Support AI** Apr 2022 – Jul 2022 Development of AI technology for explainable expert decision-making. Funded by the Korean Government (Ministry of Science and ICT) **Contextual-Numerical Embedding for Reasoning** Jul 2021 – Dec 2021 Development of context-number embedding for numerical reasoning in QA. Funded by the Korean Government (Ministry of Science and ICT) **ExoBrain** Apr 2020 - Jul 2023 Development of Knowledge Evolutionary WiseQA Platform Technology. Funded by the Korean Government (Ministry of Science and ICT) **Smart Interaction and Context Association** Apr 2020 - Mar 2021 Machine Learning for Context Association and Smart Interaction Suggestion. Funded by the Korean Government (Ministry of Science and ICT) **AI-based National Online Petition System** Apr 2021 - Dec 2021 Development of AI-based national Online Petition System for citizen deliberation. Funded by KAISTs Exploratory Research Program

#### **Purdue University - IITP Capstone**

Raw radar data object detection and stealth UAV design. Funded by the Korean Government (IITP)

### 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