Jongha Kim

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https://jonghakim35.github.io/

EDUCATION

Korea University — Seoul, Republic of Korea
M.S. & Ph.D. Integrated Student in Computer Science and Engineering — Sep 2022 - Current
Advised by Professor Hyunwoo J. Kim at MLV Lab, KAIST

Korea University — Seoul, Republic of Korea
B.S. in Computer Science and Engineering — Mar 2018 - Aug 2022
B.S. in Statistics (Double Major)
GPA : 4.22 / 4.5 (Major : 4.25 / 4.5)

RESEARCH INTERESTS

My goal is to develop personalized and reliable multimodal AI agents. My research focuses on personalizing Multimodal Large Language Models, exploring post-training methods (*e.g.,* DPO), systems (*e.g.,* RAG), and ways to leverage structured representations to complement these models to achieve the goal.

PUBLICATIONS

[1] **VidChain: Chain-of-Tasks with Metric-based Direct Preference Optimization for Dense Video Captioning**
Ji Soo Lee*, Jongha Kim*, Jeehye Na, Jinyoung Park, Hyunwoo J. Kim
AAAI Conference on Artificial Intelligence (***AAAI***), 2025. [paper]

[2] **Groupwise Query Specialization and Quality-Aware Multi-Assignment for Transformer-based Visual Relationship Detection**
Jongha Kim*, Jihwan Park*, Jinyoung Park*, Jinyoung Kim, Sehyung Kim, Hyunwoo J. Kim
IEEE/CVF Conference on Computer Vision and Pattern Recognition ***(CVPR)***, 2024. [paper]

[3] **Concept Bottleneck with Visual Concept Filtering for Explainable Medical Image Classification**
Injae Kim*, Jongha Kim*, Joonmyung Choi, Hyunwoo J. Kim
MedAGI Workshop at International Conference on Medical Image Computing and Computer-Assisted Intervention ***(MedAGI@MICCAI)***, 2023 (**Oral Presentation**). [paper]

[4] **Object Detection in Aerial Images with Uncertainty-Aware Graph Network**
Jongha Kim, Jinheon Baek, Sung Ju Hwang
VOLI Workshop at European Conference on Computer Vision ***(VOLI@ECCV)***, 2022. [paper]

[5] **Relevance-aware Multi-context Contrastive Decoding for Retrieval-augmented Visual Question Answering**
Jongha Kim, Byungoh Ko, Jeehye Na, Jinsung Yoon, Hyunwoo J. Kim
In collaboration with Google Cloud AI
Under Review

[6] **Improved Query Specialization for Transformer-based Visual Relationship Detection**
Jongha Kim, Jihwan Park, Jinyoung Park, Jinyoung Kim, Sehyung Kim, Hyunwoo J. Kim
Under Review

[7] **SuperClip Pyramid with Positional Parameterization for Video Temporal Grounding**
Sanghyeok Lee, Juyeon Ko, Joonmyung Choi, Jongha Kim, Hyunwoo J. Kim
In collaboration with KT Gen AI Lab
Under Review

[8] **TabFlash: Efficient Table Understanding with Progressive Question Conditioning and Token Focusing**
Jongha Kim, Minseong Bae, Sanghyeok Lee, Jinsung Yoon, Hyunwoo J. Kim
In collaboration with Google Cloud AI
Under Review

(denotes equal contribution)*

Work Experiences

MLV Lab — Seoul, Republic of Korea
- M.S. & Ph.D. Integrated Student at MLV Lab, Korea University — Sep 2022 - Current
- Advised by Professor Hyunwoo J. Kim, Korea University

MLAI Lab — Seoul, Republic of Korea
- Undergraduate Research Intern at MLAI Lab, KAIST — Jan 2021 - Jul 2022
- Advised by Professor Sung Ju Hwang, KAIST

Upstage AI — Seongnam, Republic of Korea
- Teaching Assistant & Mentor of BoostCamp AI Tech 1-3rd course — Dec 2020 - Jun 2022
- Developed course materials, and assignments and handled questions about lectures and assignments.
- Collaborated with Professor Tae Hyun Oh, POSTECH

VoyagerX — Seoul, Republic of Korea
- Developer Intern — Jul 2020 - Jan 2021
- Developed, enhanced, and deployed deep learning models for scanning books and documents in the mobile scanner application vFlat.
- TensorFlow, TensorFlow Lite

SW Maestro — Seoul, Republic of Korea
- 10'th trainee at SW Maestro Program — May 2019 - Nov 2019
- Developed and deployed a backend server and a deep learning model for a smartphone application DalDang, measuring the sugar content of an apple.
- TensorFlow, Node.js, AWS

Patents

Information providing method and system for sharing fruit information including sugar content information measured through image vision processing.
Sanghoon Lee, Hyemin Song, Jongha Kim, Hyun Kim.
Korea Patent No.10-2020-0153010.

Method for measuring sugar content of apple using image.
Sanghoon Lee, Hyemin Song, Jongha Kim.
Korea Patent No.10-2242155, registered on Apr 14, 2021

Honors & Awards

Travel Grant for CVPR 2024 — Jun 2024
CVPR 2024

Graduate School Outstanding Freshman Scholarship — Sep 2022
Korea University

Dean's List — Spring 2019
Korea University

Semester High Honors — Fall 2018/2019/2021, Spring 2019/2020/2021
Korea University

2020 Agrifood Public Big Data Startup Competition — Aug 2020
Rural Development Administration

National Scholarship for Science and Engineering Spring 2018 - Spring 2022
Korea Student Aid Foundation

ACADEMIC SERVICES

Reviewer of **NeurIPS** (Conference on Neural Information Processing System)	2024,2025
Reviewer of **CVPR** (IEEE/CVF Conference on Computer Vision and Pattern Recognition)	2024,2025
Reviewer of **ICLR** (International Conference on Learning Representations)	2025
Reviewer of **AAAI** (AAAI Conference on Artificial Intelligence)	2025,2026
Reviewer of **AISTATS** (International Conference on Artificial Intelligence and Statistics)	2025
Reviewer of **ICML** (International Conference on Machine Learning)	2025
Program Committee of **MedAGI@MICCAI** (MedAGI Workshop at International Conference on Medical Image Computing and Computer-Assisted Intervention)	2024,2025

TALKS

Teaching Assistant Seoul, Republic of Korea
Special Topics in Artificial Intelligence (AAA740), Korea University Fall 2024

Korea University & LG AI Workshop Seoul, Republic of Korea
Korea University Feb 2023

Defining and solving problems in deep learning projects Virtual
BoostCamp AI Tech 2nd course, Upstage AI Nov 2021

SKILLS

Language

- Korean (*native*)
- English (*fluent*), TEPS : 544/600 (*officially described as 'Native Level of English Proficiency'*)

Programming Skills

- Python, PyTorch, Git, Bash (Most proficient)
- TensorFlow, SQL, Node.js, React.js, Vue.js (Experienced)
- Website built: MedAGI Workshop 2024, Personal Blog

Last Updated: Mar 18, 2025