Kibum Kim

PH.D STUDENT

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Research Interest ___

Deep Learning/Machine Learning

Scene Understanding, Large Language Model, Recommendation

- Alleviation of Long-tailed Distribution: Enhancing the model's capability towards minority classes to counteract the long-tailed distribution commonly found in real-world data.
 - *Scene Understanding*: [2], [4], [6]
 - Recommendation: [3]
 - Graph Neural Networks: [1]
- Large Language Models: Leveraging the generalizability of Large Language Models (LLMs) to address practical challenges, e.g., long-tailed problems.
 - Scene Understanding: [6]

Education ___

Korea Advanced Institute of Science and Technology (KAIST)

Daejeon, South Korea Sep 2023 - Present

Ph.d in Industrial & Systems Engineering

- Research Interest: Scene Understanding, Large Language Model, Recommendation
- Advisor: Prof. Chanyoung Park

Korea Advanced Institute of Science and Technology (KAIST)

Daejeon, South Korea Aug 2021 - Jul 2023

- M.S IN INDUSTRIAL & SYSTEMS ENGINEERING
- Research Interest: Scene Understanding, Recommendation, Graph Neural Network
 Advisor: Prof. Chanyoung Park

Hanyang University

Seoul, South Korea Mar 2016 - Jul 2021

B.S. IN INDUSTRIAL ENGINEERING

- GPA: 4.09/4.5
- Early Graduation
- The period includes two years of military service, required for all Korean men

Publications _____

CONFERENCE

- [6] (CVPR 2024) Kibum Kim, Kanghoon Yoon, Jaehyeong Jeon, Yeonjun In, Jinyoung Moon, Donghyun Kim, Chanyoung Park. LLM4SGG: Large Language Model for Weakly Supervised Scene Graph Generation. [Paper] [Code]
- [5] (WWW 2024 (Oral)) Yeonjun In, Kanghoon Yoon, <u>Kibum Kim</u>, Kijung Shin, Chanyoung Park. Self-guided Robust Graph Structure Refinement. The 2024 ACM Web Conference. [Paper] [Code]
- [4] (ICLR 2024) <u>Kibum Kim</u>*, Kanghoon Yoon*, Yeonjun In, Jinyoung Moon, Donghyun Kim, Chanyoung Park. Adaptive Self-training Framework for Fine-grained Scene Graph Generation. The Twelfth International Conference on Learning Representations. [Paper] [Code]
- [3] (SIGIR 2023) <u>Kibum Kim</u>, Dongmin Hyun, Sukwon Yun, Chanyoung Park. MELT: Mutual Enhancement of Long-Tailed User and Item for Sequential Recommendation. The 46th International ACM SIGIR Conference on Research and Development in Information Retrieval. [Paper] [Code]
- [2] (AAAI 2023) Kanghoon Yoon*, <u>Kibum Kim</u>*, Jinyoung Moon, Chanyoung Park. Unbiased Heterogeneous Scene Graph Generation with Relation-aware Message Passing Neural Network. Proceedings of the AAAI Conference on Artificial Intelligence 2023. [Paper] [Code]

[1] (CIKM 2022) Sukwon Yun, <u>Kibum Kim</u>, Kanghoon Yoon, Chanyoung Park. LTE4G: Long-Tail Experts for Graph Neural Networks. Proceedings of the 31st ACM International Conference on Information & Knowledge Management. [Paper] [Code]

Projects _____

2022.06-Present AI Development for reasoning, extraction, understanding of common-sense

Collaboration with Institute for Information & communications Technology Planning & evaluation (IITP)

2021.06-Present Visual Intelligence Technique Development

Collaboration with **E**lectronics and **T**elecommunications **R**esearch **I**nstitute (ETRI)

2020.12-2021.06 Recommending Financial Product based on Graph Embeddings

Collaboration with Hana Bank

Awards & Scholarship _____

2022 Poster Competition Excellence Award

Awarded at Industrial/Social Problem Solving Session held by Department of ISysE, KAIST

2022 Hanyang Academic Achievement Award

Awarded within the top 3% among the College of Engineering, Hanyang Univ.

2020 Hanyang Brain Scholarship

Scholarship for excellent top 5% grade in Industrial Engineering department, Hanyang Univ.

2020 Outstanding Learning Activities Scholarship

Outstanding learning activities in communities held by University Innovation Support

2017 Hanyang Brain Scholarship

Scholarship for excellent top 5% grade in Industrial Engineering department, Hanyang Univ.

Professional Services

Conference Review

• 2023 - AAAI Conference on Artificial Intelligence (AAAI)

Journal Review

• 2023 - IEEE Transactions on Neural Networks and Learning Systems (TNNLS)

Teaching Experience _____

Spring 2022 KSE527: Machine Learning for Knowledge Service

Teaching Assistant

Fall 2022 KSE801: Recommender System and Graph Machine Learning

Teaching Assistant

Talks & Seminars

Jun 2023 MELT: Mutual Enhancement of Long-Tailed User and Item for Sequential Recommendation

Top Conference Session of Korea Computer Congress (KCC) 2023

Activities _____

2021.12-2022.02 Research intern in Data Science & Artificial Intelligence Lab (DSAIL)

Implementing key papers on Graph Neural Networks and Recommender Systems (link)

2018.06-2018.07 Short-term Language Study Program in China

Cultural exchange activities at Changchun University

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References		
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