Heesoo Jung

+82-10-6743-1318 | steve305@g.skku.edu

Profile

I am a Ph.D. student specializing in **Graph Neural Networks**, **recommendation systems**, and **interconnected data**, passionate about applying my research to real-world challenges. As an **internationally active researcher**, I am open to internship opportunities worldwide, eager to contribute and adapt across diverse R&D environments.

Technical Skills: Python, PyTorch, TensorFlow, Graph Neural Networks (PyG, DGL), Machine Learning, Git.

Publications

Out-of-Distribution Robust Explainer for Graph Neural Networkscode
Geonhee han, **Heesoo Jung***, Hyunju Kang, Hogun Park
Proceedings of the Knowledge Discovery and Data Mining (KDD) 2026, 2026

Harnessing Spatial Dependency for Domain Generalization in Multivariate Time-series Sensor Data
Jaehyun Bae, **Heesoo Jung**and Hogun Park
Expert Systems with Applications, Elsevier, 2026

Harnessing Influence Function in Explaining Graph Neural Networks; code
Heesoo Jung*, Chanyong Kim*, Geonhee Han, Hogun Park
Proceedings of the Knowledge Discovery and Data Mining (KDD) 2025, 2025

Complex Reasoning in Knowledge Graph Question Answering Through Query Graph Approximation
Hongjun Jeong*, Minji Kim*, **Heesoo Jung**, Ko Keun Kim, Hogun Park
Findings of the Annual Meeting of the Association for Computational Linguistics (ACL 2025 Findings) 2025, 2025

Enhancing Inductive Numerical Reasoning in Knowledge Graphs with Relation-Aware Relative Numeric Encoding
Hongjun Jeong, **Heesoo Jung**, Gayeong Kim, Juann Kim, Ko Keun Kim, Hogun Park*
Pacific-Asia Conference on Knowledge Discovery and Data Mining (PAKDD) 2025, 2025

Balancing Graph Embedding Smoothness in Self-Supervised Learning via Information-Theoretic Decomposition; code, paper
Heesoo Jung, Hogun Park
Proceedings of the Web Conference (WWW) 2025, 2025

CIMAGE: Exploiting the Conditional Independence in Masked Graph Auto-encoders; code, paper
Jongwon Park*, **Heesoo Jung***, Hogun Park
Proceedings of theACM International Conference on Web Search and Data Mining (WSDM), 2025, 2025

Improving Multi-hop Logical Reasoning in Knowledge Graphs with Context-Aware Query Representation Learning; code, paper
Junghoo Kim, **Heesoo Jung**, Hyeju Jang, Hogun Park
Findings of the Annual Meeting of the Association for Computational Linguistics (ACL 2024 Findings), 2024

Exploiting Relation-aware Attribute Representation Learning in Knowledge Graph Embedding for Numerical Reasoning; code, paper
Gayeong Kim, Soo Kyung Kim, Ko Keun Kim, Suchan Park, **Heesoo Jung**, Hogun Park
Proceedings of the Knowledge Discovery and Data Mining (KDD) 2023, 2023

Dual Policy Learning for Aggregation Optimization in Graph Neural Network-based Recommender Systems; code, paper
Heesoo Jung, Sangpil Kim, Hogun Park
Proceedings of the Web Conference (WWW) 2023, 2023

Stretchable Array sEMG Sensor with Graph Neural Network for Static and Dynamic Gestures Recognition System ; code, paper
Heesoo Jung*, Soyoung Lee*, Hyeyun Lee*, Jaeseong Kim*, Srinivas Gandla, Kyung Jae Yoon, Hogun Park, Seonkuk Kim
npj Flexible Electronics, The Nature Partner Journals series, 2023. (Impact Factor: 14.6, JCR Journal Rank in Category (EE): 2.0% (6/275)), 2023

sEMG-based gesture recognition with deep neural networks
Heesoo Jung*, Soyoung Lee*, Hogun Park
Proceedings of the VOICE AI Workshop at the 9th IEEE BigComp (BigComp) 2022, 2022

Editorial & Reviewing Activities

Session Chair	KDD (2025)
Program Committee	The WebConf (WWW) - short track (2025)
Reviewer	NeurIPS (2025), The WebConf (2025, 2026), KDD (2024, 2025 (Excellent Reviewer), 2026) ICLR (2026)

Education

Sungkyunkwan University (SKKU) *Suwon, Republic of Korea*
Ph.D in Software *September 2023 - current*

- GPA: 4.19 / 4.5
- Advisor: Hogun Park

Languages

English Professional proficiency

Research Projects

Dysphagia Detection with sEMG sensors *Suwon, KR*

Sungkyunkwan University (SKKU) *March 2024 -*

- Developed a deep learning-based method to identify Dysphagia using sEMG signals, reducing the dependency on traditional invasive techniques.

Self-Supervised Learning with Graph Neural Network *Suwon, KR*

Sungkyunkwan University (SKKU) *Aug 2023 -*

- We design an algorithm that generates a high-quality mask, leading to performance enhancement as the masking strategy relies on randomness.