

Taehyung Kwon

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https://scholar.google.co.kr/citations?user=Ld_e3xIAAAAJ

Research Interests

Tensor Decomposition, Data Compression, Data Distillation

Education

KAIST

Ph.D. in Artificial Intelligence

KAIST Data Mining Lab, Advisor: Kijung Shin

Seoul, South Korea

Mar. 2022 - Feb. 2026

KAIST

M.S. in Artificial Intelligence

KAIST Data Mining Lab, Advisor: Kijung Shin

Seoul, South Korea

Mar. 2020 - Feb. 2022

KAIST

B.S. in School of Computing

GPA: 4.0/4.3, Major GPA: 4.0/4.3, **Summa Cum Laude**

Daejeon, South Korea

Mar. 2015 - Feb. 2020

Publications

- [1] **Effective Dataset Distillation for Spatio-Temporal Forecasting with Bi-dimensional Compression (to appear)**
Taehyung Kwon*, Yeonje Choi*, Yeongho Kim, and Kijung Shin
IEEE ICDE 26.
- [2] **Effective and Lightweight Lossy Compression of Tensors: Techniques and Applications**
Jihoon Ko, Taehyung Kwon, Jinhong Jung, and Kijung Shin
Knowledge and Information Systems (SCIE Journal, 2025). [\[Link\]](#)
- [3] **Simple yet Effective Node Property Prediction on Edge Streams under Distribution Shifts (to appear)**
Jongha Lee, Taehyung Kwon, Heechan Moon, and Kijung Shin
IEEE ICDE 25. [\[Link\]](#)
- [4] **Kronecker Generative Models for Power-Law Patterns in Real-World Hypergraphs**
Minyoung Choe, Jihoon Ko, Taehyung Kwon, Kijung Shin, and Christos Faloutsos
ACM WWW 25. [\[Link\]](#)
- [5] **Begin: Extensive Benchmark Scenarios and an Easy-to-use Framework for Graph Continual Learning**
Jihoon Ko*, Shinhwan Kang*, Taehyung Kwon, Heechan Moon, and Kijung Shin
ACM TIST (SCIE Journal, 2024). [\[Link\]](#)
- [6] **Compact Lossy Compression of Tensors via Neural Tensor-Train Decomposition**
Taehyung Kwon, Jihoon Ko, Jinhong Jung, Jun-Gi Jang, and Kijung Shin.
Knowledge and Information Systems (SCIE Journal, 2024). [\[Link\]](#)
- [7] **ELiCiT: Effective and Lightweight Lossy Compression of Tensors**
Jihoon Ko, Taehyung Kwon, Jinhong Jung, and Kijung Shin.
IEEE ICDM 24. [\[Link\]](#)
- [8] **Compact Decomposition of Irregular Tensors for Data Compression: From Sparse to Dense to High-Order Tensors**
Taehyung Kwon, Jihoon Ko, Jinhong Jung, Jun-Gi Jang, and Kijung Shin.
ACM KDD 24. [\[Link\]](#)
- [9] **TensorCodec: Compact Lossy Compression of Tensors without Strong Data Assumptions**
Taehyung Kwon, Jihoon Ko, Jinhong Jung, and Kijung Shin.
IEEE ICDM 23. [\[Link\]](#) **Best Student Paper Runner-up Award**. [\[Link\]](#)
- [10] **NeuKron: Constant-Size Lossy Compression of Sparse Reorderable Matrices and Tensors**
Taehyung Kwon*, Jihoon Ko*, Jinhong Jung, and Kijung Shin.
ACM WWW 23. [\[Link\]](#)
- [11] **Finding a Concise, Precise, and Exhaustive Set of Near Bi-Cliques in Dynamic Graphs**
Hyeonjeong Shin, Taehyung Kwon, Neil Shah, and Kijung Shin.
ACM WSDM 22. [\[Link\]](#)

[12] **Learning to Pool in Graph Neural Networks for Extrapolation**
Jihoon Ko, **Taehyung Kwon**, Kijung Shin, and Juho Lee.
Preprint (2021). [\[Link\]](#)

[13] **Slicenstitch: Continuous CP Decomposition of Sparse Tensor Streams**
Taehyung Kwon*, Inkyu Park*, Dongjin Lee, and Kijung Shin.
IEEE ICDE 21. [\[Link\]](#)

Awards and Honors _____

2024	One of the Best-Ranked Papers, IEEE ICDM 2024
2023	Best Student Paper Runner-up Award, IEEE ICDM 2023
2023	One of the Best-Ranked Papers, IEEE ICDM 2023

Academic Services _____

Workshop Organizing Committees

2026	Workshop on Interplay Between Classical Tensor Methods And Foundation Models, ACM KDD
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Reviewer

2024 - 2026	ACM KDD
2026	ACM WWW
2025 - 2026	ACM CIKM
2024	Big Data Research
2024	ACM TKDD journal

TEACHING _____

Teaching Assistant

KAIST	
• AI607 Graph Mining and Social Network Analysis	Fall 2020 - 2024
• AI506 Data Mining and Search	Spring 2020 - 2024