

# Taehyung Kwon

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[https://scholar.google.co.kr/citations?user=Ld\\_e3xIAAAAJ](https://scholar.google.co.kr/citations?user=Ld_e3xIAAAAJ)

## Research Interests

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Data-centric AI, Dataset Distillation, Spatio-temporal Learning, Tensor Mining, Efficient & Scalable Machine Learning

## Work Experience

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KAIST

Research Fellow (Advisor: Prof. Kijung Shin)

Seoul, South Korea

Mar. 2026 - Present

## Education

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KAIST

Ph.D. in Artificial Intelligence

Advisor: Prof. Kijung Shin

Seoul, South Korea

Mar. 2022 - Feb. 2026

KAIST

M.S. in Artificial Intelligence

Advisor: Prof. 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

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- [1] **Effective Dataset Distillation for Spatio-Temporal Forecasting with Bi-dimensional Compression**  
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)**
- [3] **Simple yet Effective Node Property Prediction on Edge Streams under Distribution Shifts**  
Jongha Lee, Taehyung Kwon, Heechan Moon, and Kijung Shin  
**IEEE ICDE 25**
- [4] **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, 2025)**
- [5] **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**
- [6] **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, 2025)**
- [7] **ELiCiT: Effective and Lightweight Lossy Compression of Tensors**  
Jihoon Ko, Taehyung Kwon, Jinhong Jung, and Kijung Shin  
**IEEE ICDM 24**  
*Selected as One of the Best-Ranked Papers of ICDM 2023 for Fast-track Journal Invitation*
- [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**
- [9] **TensorCodec: Compact Lossy Compression of Tensors without Strong Data Assumptions**  
Taehyung Kwon, Jihoon Ko, Jinhong Jung, and Kijung Shin  
**IEEE ICDM 23**  
*Received the IEEE ICDM Best Student Paper Runner-up Award*  
*Selected as One of the Best-Ranked Papers of ICDM 2023 for Fast-track Journal Invitation*
- [10] **NeuKron: Constant-Size Lossy Compression of Sparse Reorderable Matrices and Tensors**  
Taehyung Kwon\*, Jihoon Ko\*, Jinhong Jung, and Kijung Shin  
**ACM WWW 23**

- [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**
- [12] **Slicenstitch: Continuous CP Decomposition of Sparse Tensor Streams**  
Taehyung Kwon\*, Inkyu Park\*, Dongjin Lee, and Kijung Shin  
**IEEE ICDE 21**

## Awards and Honors

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- 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

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### Workshop Organizing Committees

- 2026      **Workshop on Interplay Between Classical Tensor Methods And Foundation Models**

### Reviewers

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

## TEACHING

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### Teaching Assistant

KAIST

- AI506 Data Mining and Search
- AI607 Graph Mining and Social Network Analysis

Spring 2020 - 2024  
Fall 2020 - 2024