# GEON LEE

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## RESEARCH INTERESTS

Data Mining, Graph Mining, Machine Learning, Deep Learning, Social Network Analysis

## EDUCATION

**Korea Advanced Institute of Science and Technology (KAIST)** — Seoul, South Korea
M.S. & Ph.D. in Artificial Intelligence — Sep. 2020 –
Advisor: Kijung Shin

**Sungkyunkwan University (SKKU)** — Suwon, South Korea
B.S. in Computer Science and Engineering — Mar. 2016 – Aug. 2019
GPA: 4.41/4.50; C.S.: 4.45/4.50 (Ranked 1st in the College of CSE)

## WORK EXPERIENCE

**NEC Labs America** — Princeton, NJ, USA
Research Intern — May 2023 – Aug. 2023
Mentor: Wenchao Yu / Manager: Haifeng Chen

**Amazon** — San Francisco, CA, USA
Applied Scientist Intern — Sep. 2022 – Dec. 2022
Mentor: Zhonghao Luo / Manager: Tao Ye

## AWARDS AND HONORS

Selected as One of the **Best-Ranked Papers of ICDM 2021** — Dec. 2021
**Sungkyunkwan Presidential Award** — Aug. 2019
**Dean's List** — 2016 – 2019
**Sungkyunkwan Software Scholarship** (Full tuition scholarship) — 2016 – 2019

## TUTORIALS

[1] Mining of Real-World Hypergraphs: Patterns, Tools, and Generators
Geon Lee, Jaemin Yoo, and Kijung Shin
**KDD 2023** & **WWW 2023** & **ICDM 2022** & **CIKM 2022**

## PUBLICATIONS

[1] Hypercore Decomposition for Non-Fragile Hyperedges:
Concepts, Algorithms, Observations, and Applications
Fanchen Bu, Geon Lee, and Kijung Shin
**Data Mining and Knowledge Discovery** (SCI Journal, 2023)

[2] Temporal Hypergraph Motifs
Geon Lee and Kijung Shin
**Knowledge and Information Systems** (SCIE Journal, 2023)

[3] Set2Box: Similarity Preserving Representation Learning for Sets
Geon Lee, Chanyoung Park, and Kijung Shin
**ICDM 2022**

[4] HashNWalk: Hash and Random Walk Based Anomaly Detection in Hyperedge Streams
Geon Lee, Minyoung Choe, and Kijung Shin
**IJCAI 2022**

[5] MiDaS: Representative Sampling from Real-World Hypergraphs
Minyoung Choe, Jaemin Yoo, Geon Lee, Woonsung Baek, U Kang, and Kijung Shin
**WWW 2022**

[6] Simple Epidemic Models with Segmentation Can Be Better than Complex Ones
Geon Lee, Se-eun Yoon, and Kijung Shin
**PLOS ONE** (SCIE Journal, 2022)
*Oral presentation at* ***epiDAMIK workshop in KDD 2021***

[7] THyMe+: Temporal Hypergraph Motifs and Fast Algorithms for Exact Counting
Geon Lee and Kijung Shin
**ICDM 2021**
*Selected as One of the* ***Best-Ranked Papers of ICDM 2021***

[8] How Do Hyperedges Overlap in Real-World Hypergraphs? - Patterns, Measures, and Generators
Geon Lee*, Minyoung Choe*, and Kijung Shin (* equal contribution)
**WWW 2021**

[9] Hypergraph Motifs: Concepts, Algorithms, and Discoveries
Geon Lee, Jihoon Ko, and Kijung Shin
**VLDB 2020**

[10] MEGA: Multi-View Semi-Supervised Clustering of Hypergraphs
Joyce Jiyoung Whang, Rundong Du, Sangwon Jung, Geon Lee, Barry Drake, Qingqing Liu, Seonggoo Kang, and Haesun Park
**VLDB 2020**

[11] Hyperlink Classification via Structured Graph Embedding
Geon Lee, Seonggoo Kang, and Joyce Jiyoung Whang
**SIGIR 2019** (Short Paper)

## ACADEMIC SERVICES

**Program Committee**

- SIAM International Conference on Data Mining (**SDM**) 2024
- AAAI Conference on Artificial Intelligence (**AAAI**) 2024
- Learning on Graphs Conference (**LoG**) 2022 - 2023

**Program Committee (Tutorial Track)**

- ACM International Conference on Information and Knowledge Management (**CIKM**) 2023

**Conference Reviewer**

- The Web Conference (**WWW**) 2024
- ACM Conference on Knowledge Discovery and Data Mining (**KDD**) 2023

**Journal Reviewer**

- The VLDB Journal 2023
- IEEE Transactions on Knowledge and Data Engineering (**TKDE**) 2023
- IEEE Transactions on Neural Networks and Learning Systems (**TNNLS**) 2023

## PROJECTS

**AI-based Weather Forecast Support Development** July 2021 –
**COVID-19 Task Force** Mar. 2020 – Sep. 2020

## TEACHING

**Teaching Assistant**

- KAIST AI506 Data Mining and Search Spring 2021, 2023
- KAIST AI607 Graph Mining and Social Network Analysis Fall 2020, 2021, 2022, 2023
- KAIST AI617 Machine Learning for Robotics Spring 2022
- SKKU CSE3036 Seminar in Computer Engineering Fall 2019