

# GEON LEE

Email: geonlee0325@kaist.ac.kr

Homepage: <http://geonlee0325.github.io>

## RESEARCH INTERESTS

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

## EDUCATION

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**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

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**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

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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

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- [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

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- [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

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### Program Committee

- AAAI Conference on Artificial Intelligence (**AAAI**) 2024

### Program Committee (Tutorial Track)

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

### Conference Reviewer

- ACM Conference on Knowledge Discovery and Data Mining (**KDD**) 2023
- Learning on Graphs Conference (**LoG**) 2022 - 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

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**AI-based Weather Forecast Support Development**  
**COVID-19 Task Force**

July 2021 –  
Mar. 2020 – Sep. 2020

## TEACHING

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### Teaching Assistant

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