

Sukwon Yun

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RESEARCH INTEREST

Graph Neural Networks, Recommender Systems

- Alleviating and enhancing the *Weakness of Graph Neural Networks* where the inductive bias of GNNs do not hold ideally and designing robust GNN models under various circumstances as real-world scenarios
- **Keywords:** Long-Tail Problem, Heterophily, Oversmoothing, Missing Features

EDUCATION

KAIST, Daejeon, South Korea

Sep 2021 – Present

- M.S. in Industrial & Systems Engineering
 - Research Interest: Graph Neural Networks, Recommender Systems
 - Advisor: [Prof. Chanyoung Park](#)

Hanyang University, Seoul, South Korea

Mar 2015 – Aug 2021

- B.S. in Industrial Engineering
 - Early Graduation, GPA: 3.70/4.00 (overall) 3.79/4.00 (major), *Summa Cum Laude*
 - Period includes two years of military service, required for all Korean men

PUBLICATIONS

CONFERENCES

[C1] LTE4G: Long-Tail Experts for Graph Neural Networks

Sukwon Yun, Kibum Kim, Kanghoon Yoon, Chanyoung Park

ACM International Conference on Information and Knowledge Management (**CIKM 2022**)

RESEARCH EXPERIENCES

Tokyo Institute of Technology (Tokyo Tech), Tokyo, Japan

Oct 2022 – Present

- Visiting Student (Research-oriented) in Murata Lab.
 - Host: [Prof. Tsuyoshi Murata](#)
 - Focus: Missing Features in GNN, Heterophily in GNN

Korea Advanced Institute of Technology (KAIST), Daejeon, South Korea

Dec 2020 – Feb 2021

- Research Student in Data Science & Artificial Intelligence Lab. (DSAIL)
 - Advisor: [Prof. Chanyoung Park](#)
 - Researched fundamentals of spectral based Graph Neural Networks
 - Implemented key papers on Graph Neural Networks and Recommendation Systems
 - Gave presentations of GCN ([link](#)), GAT ([link](#)), BPR ([link](#)) during seminars

Hanyang University, Seoul, South Korea

Sep 2020 – Aug 2021

- Research Student in Intelligent Data Systems Lab. (IDSL)
 - Advisor: [Prof. Kichun Lee](#)
 - Researched advanced version of Neural Graph Collaborative Filtering
 - Implemented Matrix Factorization of BPR model using multiprocessing on Epinion dataset
 - Implemented One-Class SVM on anomaly detection task using MNIST dataset

AWARDS & SCHOLARSHIPS

SIGIR Student Travel Award

2022

- ACM International Conference on Information and Knowledge Management, Georgia, USA

Korea National Scholarship

2021 – Present

- Awarded by Korea Ministry of Science and ICT

Hanyang Academic Achievement Award, Hanyang University

2021

- Awarded within top 3% among the College of Engineering

Dean's List, Hanyang University

2018 - 2021

- Academic Excellence Award

Certificate of Recognition, Seoul Metropolitan Police

2018

- Awarded when serving military service as an auxiliary police

TEACHING EXPERIENCE

IE343: Statistical Machine Learning, KAIST

Spring, 2022

- Hosted Kaggle Competition (Course Project) as a Teaching Assistant
 - Competition: Predicting a person's income using a demographic dataset under an imbalance situation

PROJECTS

Recommending Financial Products based on Graph Embeddings

Feb 2021 – Feb 2022

- Collaboration with Hana Bank, South Korea
 - Generated financial networks via jaccard similarity from user's data and enhanced user representation via GNN

REFERENCES

- **Prof. Chanyoung Park**, Assistant Professor, KAIST
Email: cy.park@kaist.ac.kr
- **Prof. Kichun Lee**, Associate Professor, Hanyang University
Email: skylee@hanyang.ac.kr
- **Prof. Tsuyoshi Murata**, Professor, Tokyo Tech
Email: murata@c.titech.ac.jp