

# Yunhak Oh

[yunhak.oh@kaist.ac.kr](mailto:yunhak.oh@kaist.ac.kr) • [LinkedIn](#) • [Google Scholar](#) • [Github](#)

## RESEARCH INTEREST

### Applied Machine Learning

Mining meaningful knowledge from data to develop solutions for real changes to create practical value

- Recommender System, Graph Representation Learning, AI4Science

## PROFESSIONAL EXPERIENCE

### NielsenIQ (formerly Nielsen), Seoul, South Korea

- Manager, Data Science Jul 2018 – Aug 2021
  - Spearheaded the Auto-coding project, developing models for classifying brands and categories from web-crawled descriptions, resulting in a \$54K USD cost reduction over three months
  - Devised an innovative e-commerce market analysis approach by integrating estimations from major retailers and strategically reorganizing retailer groups to reflect market growth, resulting in a contribution of \$71.9K in revenue
  - Assisted the Merger and Acquisition process by spearheading the integration of data and solutions between the two companies, successfully contributing to the realization of a project valued at \$901K USD
  - Led a global initiative as Technical Lead to automate the client inquiry resolution process, significantly enhancing operational efficiency in collaboration with international stakeholders
- Senior Executive, Data Science Jul 2017 – Jun 2018
  - Managed data change initiatives by implementing a data-driven methodology for estimating historical data, resulting in an 83% reduction in production time
  - Led the transition to modern retail point-of-sale systems, modernizing traditional trade practices
- Executive, Data Science Jan 2015 – Jun 2017
  - Spearheaded a trading area analysis by integrating sales data, credit card transactions, and telecom traffic insights
  - Proactively developed software to enhance daily work efficiency, resulting in a 92% reduction in data extraction time and a 50% decrease in report generation time

## EDUCATION

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

- Ph.D. in Graduate School of Data Science Sep 2023 – Present
  - Research Interest: Recommender System, Graph Representation Learning, AI4Science (Cell Biology)
  - Adviser: [Prof. Chanyoung Park](#)
- M.S. in Industrial & Systems Engineering Sep 2021 – Aug 2023
  - Research Interest: Recommender System, Graph Representation Learning
  - Adviser: [Prof. Chanyoung Park](#)

### SungKyunKwan University, Gyeonggi, South Korea

Mar 2009 – Feb 2015

- B.S.E. in System Management Engineering
  - Ranked first in my graduating class (1 / 133)
  - Included two years of mandatory military service in the Office of the President of the Republic of Korea
- B.A. in Psychology
  - Dual Degree

## PUBLICATIONS

(\*: Equal contribution)

## CONFERENCES

- [C3] Subgraph Federated Learning for Local Generalization  
Sungwon Kim, Yoonho Lee, **Yunhak Oh**, Namkyeong Lee, Sukwon Yun, Junseok Lee, Sein Kim, Carl Yang, Chanyoung Park  
International Conference on Learning Representations (**ICLR 2025**)
- [C2] MUSE: Music Recommender System with Shuffle Play Recommendation Enhancement  
**Yunhak Oh\***, Sukwon Yun\*, Dongmin Hyun, Sein Kim, Chanyoung Park  
ACM International Conference on Information and Knowledge Management (**CIKM 2023**)
- [C1] GraFN: Semi-Supervised Node Classification on Graph with Few Labels via Non-Parametric Distribution Assignment  
Junseok Lee, **Yunhak Oh**, Yeonjun In, Namkyeong Lee, Dongmin Hyun, Chanyoung Park  
ACM SIGIR Conference on Research and Development in Information Retrieval (**SIGIR 2022 Short paper**)

## WORKSHOPS

- [W2] 3D Interaction Geometric Pre-training for Molecular Relational Learning  
Namkyeong Lee, **Yunhak Oh**, Heewoong Noh, Gyoung S. Na, Tianfan Fu, Chanyoung Park  
**NeurIPS 2024 Workshop on AI for New Drug Modalities**
- [W1] Subgraph Federated Learning for Local Generalization  
Sungwon Kim, Yoonho Lee, **Yunhak Oh**, Namkyeong Lee, Sukwon Yun, Junseok Lee, Sein Kim, Carl Yang, Chanyoung Park  
**KDD 2024 Workshop on Federated Learning for Data Mining and Graph Analytics (Oral)**  
**(Best Paper Award)**

#### JOURNALS

- [J2] Discovering relationships between skin type and life style using data mining techniques: A case study of Korea  
Taeheung Kim, Jihyun Ha, Jong-Seok Lee, **Yunhak Oh**, Yong Ju Cho  
Industrial Engineering and Management Systems (2016.03)
- [J1] Using data mining techniques to predict win-loss in Korean professional baseball games  
**Yunhak Oh**, Han Kim, Jaesub Yun, Jong-Seok Lee  
Journal of Korean Institute of Industrial Engineers (2014.02)

#### AWARDS & SCHOLARSHIPS

- Best Paper Award** 2024
- KDD 2024 Workshop on Federated Learning for Data Mining and Graph Analytics (FedKDD), Barcelona, Spain
- Nielsen Simply Excellent Awards, NielsenIQ**
- **Gold Award**, Developed and rolled out a Client Inquiry Tool for the global market 2020
  - **Gold Award**, Created a best practice of Digitalization and Automation 2020
  - **Silver Award**, Developed a Client Inquiry Automation tool 2019
  - **Platinum Award**, Developed and rolled out auto-coding project 2019
  - **Gold Award**, Contributed data and solution integration in the M&A process 2018
  - **Gold Award**, Launched E-commerce Market Read Index version 3.0 of South Korea 2018
  - **Gold Award**, Led Digitalization and Automation project 2017
  - **Gold Award**, Enhanced Ice-cream Market Read Index of South Korea 2017
  - **Gold Award**, Enhanced FMCG Market Read Index of South Korea and boosted client satisfaction 2015
- Certificate, Nielsen** 2019
- Selected as one of the top 20 global data science talents to participate in a leadership development program
- Certificate, SungKyunKwan University** 2015
- Awarded as a representative of the Department of System Management Engineering at the commencement
- National Science and Engineering Scholarship, Korea Student Aid Foundation** 2013 – 2014
- Awarded to a top student in the Department of System Management Engineering
- Bronze Award, Korea Institute of Industrial Engineers** 2013
- Solved industrial problems by building an ML model at a University Student Project Competition
- Academic Excellence Scholarship, SungKyunKwan University** 2009 – 2011

#### PROFESSIONAL SERVICES

- Conference Reviews**
- International Conference on Learning Representations (ICLR) 2025

#### TALKS AND SEMINARS

- MUSE: Music Recommender System with Shuffle Play Recommendation Enhancement**
- Top Conference Session of Korea Software Congress (KSC) 2023

#### REFERENCES

- Prof. Chanyoung Park**, Assistant Professor, KAIST  
Email: cy.park@kaist.ac.kr
- Prof. Jong-Seok Lee**, Associate Professor, KAIST  
Email: jongseok.lee@kaist.ac.kr

[CV compiled on 2025-02-03 for Acme Corporation]