Yunhak Oh

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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 (Cell Biology)

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
  - *Summa Cum Laude* (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

[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)**

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)

WORKSHOPS

[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)

IN SUBMISSION

CONFERENCES

[S1] Toward Generalizability of Graph-based Imputation on Bio-Medical Missing Data
Sukwon Yun, **Yunhak Oh**, Junseok Lee, Xin Liu, Tsuyoshi Murata, Dongmin Hyun, Sein Kim, Tianlong Chen, Chanyoung Park
Under Review

AWARDS & SCHOLARSHIPS

- **Simply Excellent Gold Awards**, NielsenIQ 2020
  Developed and rolled out a Client Inquiry Tool for the global market
- **Certificate**, Nielsen 2019
  Selected as one of the top 20 global data science talents to participate in a leadership development program
- **Simply Excellent Gold Awards**, Nielsen 2020
  Created a best practice of Digitalization and Automation
- **Simply Excellent Silver Awards**, Nielsen 2019
  Developed a Client Inquiry Automation tool
- **Simply Excellent Platinum Awards**, Nielsen 2019
  Developed and rolled out auto-coding project
- **Simply Excellent Gold Awards**, Nielsen 2018
  Contributed data and solution integration in the M&A process
- **Simply Excellent Gold Awards**, Nielsen 2018
  Launched E-commerce Market Read Index version 3.0 of South Korea
- **Simply Excellent Gold Awards**, Nielsen 2017
  Led Digitalization and Automation project
- **Simply Excellent Gold Awards**, Nielsen 2017
  Enhanced Ice-cream Market Read Index of South Korea
- **Simply Excellent Gold Awards**, Nielsen 2015
  Enhanced FMCG Market Read Index of South Korea and boosted client satisfaction
- **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

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, SungKyunKwan University
  Email: jongseok@skku.edu

[*CV compiled on 2024-09-02 for Acme Corporation*]