# Youngeun Nam

Motto: "Irreplaceable" March 19, 2025

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# **RESEARCH INTEREST**

Data Analysis, Deep Learning, Generative Model, Anomaly Detection, Multi-Modal Learning, RAG

# **EDUCATION**

Korea Advanced Institute of Science and Technology (KAIST)

Ph.D. in School of Computing

Mar. 2022 – Feb. 2026(expected)

Advisor: Jae-Gil Lee

Korea Advanced Institute of Science and Technology (KAIST)

M.S. in Industrial and System Engineering (Graduate School of Data Science)

Mar. 2020 – Feb. 2022

Advisor: Jae-Gil Lee

Pohang University of Science and Technology (POSTECH)

B.S. in Industrial and Management Engineering

Cum Laude

*Mar.* 2013 – Feb. 2017

#### **PUBLICATIONS**

# Conferences

- [11] {Na, J., Nam, Y.}, Yoon, S., Song, H., Lee, J., and Lee, B. S., "*Mobility Networked Time-Series Forecasting Benchmark Datasets*". International AAAI Conference on Web and Social Media (ICWSM Posters, Demos, and Datasets Track). Copenhagen, Denmark, 2025.
- [10] Bae, M., Shin, Y., Nam, Y., Lee, Y., and Lee, J., "Semi-Supervised Learning for Time Series Collected at a Low Sampling Rate". Proceedings of the 30th ACM SIGKDD International Conference on Knowledge Discovery & Data Mining (KDD), Barcelona, Spain, 2024.
- [9] **Nam, Y.**, Yoon, S., Shin, Y., Bae, M., Song, H., Lee, J., and Lee, B. S., "*Breaking the Time-Frequency Granularity Discrepancy in Time-Series Anomaly Detection*". International World Wide Web Conference (WWW), Singapore, Singapore, 2024.
- [8] Nam, Y., Trirat, P., Kim, T., Lee, Y., and Lee, J. "Context-Aware Deep Time-Series Decomposition for Anomaly Detection in Businesses". Proceedings of European Conference on Machine Learning and Principles and Practice of Knowledge Discovery in Databases (ECML-PKDD), Torino, Italy, 2023.
- [7] Shin, H., Kang, J., Akbar, I., Choi, S., **Nam, Y.**, Lee, J. "An Empirical Investigation of Deep Learning Models for Defect Classification in Solar Cells Electroluminescence". Korea Computer Congress, 2023.

- [6] {Trirat, P., Nam, Y.}, Kim, T., and Lee, J. "AnoViz: A Visual Inspection Tool of Anomalies in Multivariate Time Series". The Thirty-Seventh AAAI Conference on Artificial Intelligence (Demonstration Program), Washington, DC, 2023.
- [5] Kim, T., Bae, M., Jung, H., **Nam, Y.**, Shin, Y., Min, H. "User-Adaptive Ranking System on Mobile Trading Applications". Korea Computer Congress, 2022.
- [4] Kim, D., Min, H., Nam, Y., Song, H., Yoon, S., Kim, M., Lee, J. "COVID-EENet: Predicting Fine-Grained Impact of COVID-19 on Local Economies". The Thirty-Sixth AAAI Conference on Artificial Intelligence, Virtual Event, 2022.
- [3] Na, J., Kang, J., Bae, M., **Nam, Y.**, Lee, J. "Vessel Trajectory Periodic Pattern Mining by Using AIS Data". Korea Computer Congress, 2021.
- [2] Nam, Y., Kang, J., Lee, J. "ActiveBoostThief: Model Extraction Attack Using Reliable Active Learning". Korea Computer Congress, 2021.
- [1] Kim, M., Kang, J., Kim, D., Song, H., Min, H., Nam, Y., Park, D. Lee, J. "Hi-COVIDNet: Deep Learning Approach to Predict Inbound COVID-19 Patients and Case Study in South Korea". Proceedings of the 26th ACM SIGKDD International Conference on Knowledge Discovery & Data Mining (KDD), Virtual Event, California, 2020.

## **ACADEMIC EXPERIENCE**

| <b>Research Int</b> | ernship |
|---------------------|---------|
|---------------------|---------|

Data Mining Lab

Advisor: Sungzoon Cho

Seoul National University

Aug. 2018 – Jul. 2018

Experience Design & Engineering Lab

Advisor: Sungho Han

POSTECH

Sep. 2015 – Dec. 2015

**Activities** 

Management Strategy Student Association (MSSA)

POSTECH

Sponsor: 3M Korea, POSCO Sep. 2014 – Dec. 2016

Future Industrial Engineering Leaders and Dreamers (FIELD Camp)

Korea University

Aug. 2014

International Conference for the Integration of Science, Technology and Society

ICIST-KAIST Delegates

Aug. 2014

**Teaching Assistant** 

[CS360] Introduction to Database KAIST

Advisor: Jae-Gil Lee Sep. 2023 – Dec. 2023

[CS564] Data Science Methodology KAIST

Advisor: Jae-Gil Lee Mar. 2023 – Jun. 2023

(Outstanding Teaching Assistant Award)

| [CS564] Data Science Methodology<br>Advisor: Jae-Gil Lee  | KAIST<br>Sep. 2022 – Dec. 2022   |
|---|--|
| [CS492(D)] Special Topics in Computer Science <introduction data="" science="" to=""> Advisor: Jae-Gil Lee</introduction>   | KAIST<br><i>Mar.</i> 2022 – Jun. 2022  |
| WORK EXPERIENCE   |  |
| Data Analyst, Fitogether Inc. Software Engineer, Hyundai Autoever   | Sep. 2018 – Nov. 2019<br>Jan. 2017 – Dec. 2017   |
| OTHER EXPERIENCE  |  |
| Mentor, Hyoam High School Program SHOOTART Women's Futsal Club SAMSUNG Dream Class Mentor RC Volunteers POSTECH Residential College Residential Advisor 16 <sup>th</sup> LS University Students Overseas Volunteers Mentor, Hyoam High School Program President of the Female Student Council Exchange Students, Korea National University of Arts Busking (Keyboard) in Seoul Hong Kong Toys & Games Fair 2013 Exhibitor | Jul. 2021  Jan. 2017 – Present  Jul. 2016 – Aug. 2016  Mar. 2016 – Dec. 2016  Feb. 2016 – Dec. 2016  Jul. 2015 – Sep. 2015  Jul. 2015  Jan. 2015 – Dec. 2015  Jun. 2014, Dec. 2015  Jan. 2014  Jan. 2013 |
|   |  |
| Research Projects Samsung Mobile Experience   | KAIST  |
| - Few-shot Anomaly Detection and Root Cause Estimation development  | Jul. 2022 – Jul. 2023  |
| Samsung Mobile Experience - Real-time service incident prediction development   | KAIST<br>Jun. 2021 – Jun. 2022   |
| Samsung SDS  - Storage-based platform model business idea research project  - Platform proposal that provides new value to storage consumers  | Seoul National University  Aug. 2018 – Jul. 2018   |
| Hyundai Card/Capital/Commercial - Hyundai Card/Capital/Commercial Blockchain Platform Construction and Service Task   | Hyundai Autoever<br>Jun. 2017 – Dec. 2017  |
| Course Projects  [CS575] AI Ethics  - Solving the Bias in Social Attitude Problem of News Recommendation System   | KAIST<br>Spring 2022   |
| [CS470] Introduction to Artificial Intelligence   | KAIST  |

| - Unsupervised Anomaly Detection in Time Series with Temporal Context        | Spring 2022 |
|--|-------------|
| [CS570] Artificial Intelligence and Machine Learning                         | KAIST       |
| - Time-series anomaly detection via multiresolution ensemble learning        | Spring 2021 |
| [KSE526] Analytical Methodologies for Big Data                               | KAIST       |
| - WAD: Anomaly detection for ECG data using CNN improved by Wavelet analysis | Fall 2020   |
| [CS548] Advanced Information Security  | KAIST       |
| - Black-box attack using active learning                                     | Fall 2020   |

### **AWARDS AND HONORS**

| Outstanding Reviewer, KDD 2025 August   | 2024 |
|---|------|
| Excellence in Character Scholarship, 2024 (₩1,000,000)                                  | 2024 |
| Young-Han Kim Global Leader Scholarship, 2024 (₩4,000,000)                              | 2024 |
| School of Computing, KAIST, Outstanding Teaching Assistant Award, 2023 Spring           | 2023 |
| The Thirty-Seventh AAAI Conference on Artificial Intelligence Scholarship, 2023 (\$500) | 2023 |
| Department of Industrial & Systems Engineering, KAIST, Scholarship, 2021 (₩1,000,000)   | 2021 |
| FIELD Silver Award, Future Industrial Engineering Leaders and Dreamers Camp             | 2016 |

### **REVIEWER SERVICES**

# **Program Committee**

- ACM International World Wide Web Conference (WWW): 2024
- ACM SIGKDD Conference on Knowledge Discovery and Data Mining (KDD): 2024
- Annual Conference on Neural Information Processing Systems (NeurIPS): 2024
- Asian Conference on Machine Learning Conference Track (ACML): 2024
- ACM SIGKDD Conference on Knowledge Discovery and Data Mining (KDD): 2025 August
  - Recognized as an Outstanding Reviewer
- International Conference on Learning Representations (ICLR): 2025
- Artificial Intelligence and Statistics (AISTATS): 2025
- ACM International World Wide Web Conference (WWW): 2025
- ACM SIGKDD Conference on Knowledge Discovery and Data Mining (KDD): 2025 February

#### **PROGRAMMING SKILLS**

Python(Intermediate), R(Intermediate), Excel(Intermediate), C(Basic), C++(Basic), Java(Basic)