

# Youngeun Nam

Motto: “Irreplaceable”

Sep 12, 2023

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## RESEARCH INTEREST

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Data Analysis, Machine Learning, Time Series, Anomaly Detection, Sports Data Analysis, Networked TS

## EDUCATION

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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

Mar. 2013 – Feb. 2017

*Cum Laude*

## PUBLICATIONS

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### Conferences

[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. 2020.

[2] **Nam, Y.**, Kang, J., Lee, J. “*ActiveBoostThief: Model Extraction Attack Using Reliable Active Learning*”. Korea Computer Congress. 2021.

[3] Na, J., Kang, J., Bae, M., **Nam, Y.**, Lee, J. “*Vessel Trajectory Periodic Pattern Mining by Using AIS Data*”. Korea Computer Congress. 2021.

[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. 2022.

[5] 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). 2023.

[6] 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.

[7] **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). 2023.

## ACADEMIC EXPERIENCE

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### Research Internship

|                                     |                              |
|-------------------------------------|------------------------------|
| Data Mining Lab                     | Seoul National University    |
| Advisor: Sungzoon Cho               | <i>Aug. 2018 – Jul. 2018</i> |
| Experience Design & Engineering Lab | POSTECH                      |
| Advisor: Sungho Han                 | <i>Sep. 2015 – Dec. 2015</i> |

### Activities

|   |                              |
|---|------------------------------|
| Management Strategy Student Association (MSSA)                                  | POSTECH                      |
| Sponsor: 3M Korea, POSCO  | <i>Sep. 2014 – Dec. 2016</i> |
| Future Industrial Engineering Leaders and Dreamers (FIELD Camp)                 | Korea University             |
| Competition Silver Award  | <i>Aug. 2014</i>             |
| International Conference for the Integration of Science, Technology and Society | KAIST                        |
| ICIST-KAIST Delegates   | <i>Aug. 2014</i>             |

### Teaching Assistant

|   |                              |
|---|------------------------------|
| [CS492(D)] Special Topics in Computer Science<Introduction to Data Science> | KAIST                        |
| Advisor: Jae-Gil Lee  | <i>Mar. 2022 – Jun. 2022</i> |
| [CS564] Data Science Methodology  | KAIST                        |
| Advisor: Jae-Gil Lee  | <i>Sep. 2022 – Dec. 2022</i> |
| [CS564] Data Science Methodology  | KAIST                        |
| Advisor: Jae-Gil Lee  | <i>Mar. 2023 – Jun. 2023</i> |
| [CS360] Introduction to Database  | KAIST                        |
| Advisor: Jae-Gil Lee  | <i>Sep. 2023 – Dec. 2023</i> |

## WORK EXPERIENCE

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|                                     |                              |
|-------------------------------------|------------------------------|
| Data Analyst, Fitotogether Inc.     | <i>Sep. 2018 – Nov. 2019</i> |
| Software Engineer, Hyundai Autoever | <i>Jan. 2017 – Dec. 2017</i> |

## OTHER EXPERIENCE

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|   |                              |
|---|------------------------------|
| Mentor, Hyoam High School Program               | <i>Jul. 2021</i>             |
| SHOOTART Women’s Futsal Club                    | <i>Jan. 2017 – Present</i>   |
| SAMSUNG Dream Class Mentor                      | <i>Jul. 2016 – Aug. 2016</i> |
| RC Volunteers                                   | <i>Mar. 2016 – Dec. 2016</i> |
| POSTECH Residential College Residential Advisor | <i>Feb. 2016 – Dec. 2016</i> |

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|---|------------------------------|
| 16 <sup>th</sup> LS University Students Overseas Volunteers | <i>Jul. 2015 – Sep. 2015</i> |
| Mentor, Hyoam High School Program                           | <i>Jul. 2015</i>             |
| President of the Female Student Council                     | <i>Jan. 2015 – Dec. 2015</i> |
| Exchange Students, Korea National University of Arts        | <i>Jun. 2014, Dec. 2015</i>  |
| Busking (Keyboard) in Seoul                                 | <i>Jan. 2014</i>             |
| Hong Kong Toys & Games Fair 2013 Exhibitor                  | <i>Jan. 2013</i>             |

## PROJECTS

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### Research Projects

|   |                              |
|---|------------------------------|
| Samsung Mobile Experience   | KAIST                        |
| - Few-shot Anomaly Detection and Root Cause Estimation development                  | <i>Jul. 2022 – Jul. 2023</i> |
| Samsung Mobile Experience   | KAIST                        |
| - Real-time service incident prediction development                                 | <i>Jun. 2021 – Jun. 2022</i> |
| Samsung SDS   | Seoul National University    |
| - Storage-based platform model business idea research project                       | <i>Aug. 2018 – Jul. 2018</i> |
| - Platform proposal that provides new value to storage consumers                    |                              |
| Hyundai Card/Capital/Commercial   | Hyundai Autoever             |
| - Hyundai Card/Capital/Commercial Blockchain Platform Construction and Service Task | <i>Jun. 2017 – Dec. 2017</i> |

### Course Projects

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|--|--------------------|
| [CS575] AI Ethics  | KAIST              |
| - Solving the Bias in Social Attitude Problem of News Recommendation System  | <i>Spring 2022</i> |
| [CS470] Introduction to Artificial Intelligence                              | KAIST              |
| - Unsupervised Anomaly Detection in Time Series with Temporal Context        | <i>Spring 2022</i> |
| [CS570] Artificial Intelligence and Machine Learning                         | KAIST              |
| - Time-series anomaly detection via multiresolution ensemble learning        | <i>Spring 2021</i> |
| [KSE526] Analytical Methodologies for Big Data                               | KAIST              |
| - WAD: Anomaly detection for ECG data using CNN improved by Wavelet analysis | <i>Fall 2020</i>   |
| [CS548] Advanced Information Security  | KAIST              |
| - Black-box attack using active learning                                     | <i>Fall 2020</i>   |

## AWARDS AND HONORS

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|   |             |
|---|-------------|
| The Thirty-Seventh AAAI Conference on Artificial Intelligence Scholarship, 2023 (\$500) | <i>2023</i> |
| Department of Industrial & Systems Engineering, KAIST, Scholarship, 2021 (₩1,000,000)   | <i>2021</i> |
| FIELD Silver Award, Future Industrial Engineering Leaders and Dreamers Camp             | <i>2016</i> |

## PROGRAMMING SKILLS

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