

Yongjae Lee

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Biography

Yongjae Lee is a master's candidate in Industrial Data Science & Engineering at Pusan National University, Republic of Korea. His research interests include business process management and data science. He received his bachelor's degree in Industrial Engineering from Pusan National University in 2024. He is currently developing deep learning architectures for business process management.

Education

Pusan National University <i>Bachelor's in Industrial Engineering</i>	2018.03 ~ 2024.02
Pusan National University <i>Master's in Industrial Data Science & Engineering</i> <i>Supervisor: Prof. Hyerim Bae</i>	2024.03 ~ 2026.02

Research Projects

A Study on the XPL (eXplainable Process Learning) Methodology based on Artificial Intelligence	2023.03 ~ 2026.02
<ul style="list-style-type: none"> Developed an AI-based process mining methodology to create an automation tool capable of process monitoring, detection, analysis, and improvement. Main Developer 	

Human Centered – Carbon Neutral Global Supply Chain Research	2023.06 ~ 2025.02
<ul style="list-style-type: none"> Developed a core technology for building an ecosystem that prioritizes safety and environmental sustainability across an integrated supply chain Sub-Developer 	

Industrial Projects

Development of Process Mining and AI-based Affectionate Intelligence Technology for Customer-Specific Behavior Modeling (with LG Electronics)	2024.03 ~ present
<ul style="list-style-type: none"> Developed a methodology for managing the customer's product usage process. Main Developer 	

Teaching Experience

Tutor, LG Electronics Process Mining Term Project	2025.06 ~ 2025.07
Teaching Assistant, LGE Process Mining Classroom Training (Supported by Celonis)	2025.06
Teaching Assistant, LG Electronics Process Mining Classroom Training	2024.06
Teaching Assistant, Data Structures and Algorithms, Undergraduate Course	2024.03 ~ 2024.07

Awards

Grand Prize	2023.08
<ul style="list-style-type: none"> PNU Industrial Artificial Intelligence Competition 	
Grand Prize	2023.02
<ul style="list-style-type: none"> Graduation Project in Industrial Engineering, Pusan National University 	

Conference

Only if the first author and presenter

KIIE , Korea Institute of Industrial Engineers 2025 Fall Conference	2025.11
· <i>Title: DHM: A Dual-Modality Hierarchical Network for Multi-Perspective Business Process Anomaly Detection</i>	
BPM 2025 Main Track , The 23 rd International Conference on Business Process Management	2025.09
· <i>Title: Multi-task Trained Graph Neural Network for Business Process Anomaly Detection with a Limited Number of Labeled Anomalies</i>	
ICPR28 , The 28 th International Conference on Production Research	2025.07
· <i>Title: Process-Aware Prediction of Procurement Lead Time for Shipyard Delay Mitigation</i>	
LOGMS2023 , The 11 th International Conference on Logistics and Maritime Systems	2023.09
· <i>Title: Import Container Dwell Time: Analysis of Determinant Factors with Explainable Artificial Intelligence</i>	

Publications

Excluding Korean Publications

[1] Reasoning-Aware Proxy Reward Model using Process Mining <i>Yongjae Lee, Taekhyun Park, Sunghyun Sim, Hyerim Bae</i> <i>arXiv preprint</i>	2025.10
[2] Multi-task Trained Graph Neural Network for Business Process Anomaly Detection with a Limited Number of Labeled Anomalies <i>Yongjae Lee, Dohee Kim, Donghwan Kim, Hyerim Bae</i> <i>Lecture Notes in Computer Science (LNCS)</i>	2025.08
[3] Identifying Key Factors influencing Import Container Dwell Time using eXplainable Artificial Intelligence <i>Yongjae Lee, Kikun Park, Hyunjae Lee, Jongpyo Son, Seonhwan Kim, Hyerim Bae</i> <i>Maritime Transport Research (IF 3.9)</i>	2024.12
[4] Predictive Process Monitoring for Remaining Time Prediction with Transfer Learning <i>I.A. Nur, K.I. Mustafa, R.M. Hanif, Dohee Kim, Yongjae Lee, Hyerim Bae</i> <i>ICIC Express Letters</i>	2024.08
[5] JustDense: Just using Dense instead of Sequence Mixer for Time Series Analysis <i>Taekhyun Park, Yongjae Lee (co-first), Daesan Park, Dohee Kim, Hyerim Bae</i> IEEE International Conference on Big Data 2025 Proceeding	Accepted
[6] Process-Aware Procurement Lead Time Prediction for Shipyard Delay Mitigation <i>Yongjae Lee, Eunhee Park, Daesan Park, Dongho Kim, Jongho Choi, Hyerim Bae</i> Submitted to selected papers of international conference on production research (ICPR)	Under Review

Patents

Continual Learning Method and Device with Adaptive Memory Mechanism for Predictive Process Monitoring · <i>Hyerim Bae, I.A. Nur, Yongjae Lee, Dohee Kim</i> · <i>Korean Patent, No.10-2025-0026041</i>	2025.02
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Tech Stack

Language: Python, JavaScript

Framework: PyTorch, PyTorch Geometric

Simulation: Siemens Plant Simulation

Markup: Markdown, Latex, HTML, CSS