Yongjae Lee

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Biography

Yongjae Lee is a Master's candidate in Industrial Data Science & Engineering at the Pusan National University, Republic of Korea. His research interests include Business Process Management, Process Mining, and Data Science. He received his Bachelor's degree in Industrial Engineering from the Pusan National University in 2024. He is currently working on developing deep learning models for process mining and business process management.

Education

Pusan National University *2018.03 – 2024.02*
BS in Industrial Engineering

Pusan National University *2024.03 –*
MS in Industrial Data Science & Engineering

Projects

A Study on the XPL (eXplainable Process Learning) *2023.03 - 2026.02*

- Developed an AI-based explainable process mining methodology to create an automation tool capable of process monitoring, detection, analysis, and improvement.
- Tools Used: Python, PyTorch, R

Development of Process Mining and AI-based Affectionate Intelligence Technology for Customer-Specific Behavior Modeling (with LG) *2024.03 - 2026.02*

- Developed a methodology for managing the customer's product usage process from a process perspective.
- Tools Used: Python, PyTorch

Human Centered – Carbon Neutral Global Supply Chain Research *2023.06 - 2025.02*

- Developed a core technologies for building an ecosystem that prioritizes safety and environmental sustainability across an integrated supply chain—spanning maritime, port, and land transport.
- Tools Used: Python, PyTorch

Teaching Experience

Teaching Assistant, Pusan National University *2025.06 - 2025.07*

- LG Electronics Process Mining Term Project Guidance (3rd Prize)
  Title: *RAG-based Customer Claim Analysis System with Interface for LGE.*

Teaching and Practicum Assistant, Pusan National University *2025.06*

- Process Mining Classroom Training for LG Electronics (supported by Celonis)

Teaching and Practicum Assistant, Pusan National University *2024.06*

- Process Mining Classroom Training for LG Electronics

Teaching and Practicum Assistant, Pusan National University *2024.03 - 2024.07*

- Data Structures and Algorithms for Undergraduate Students

Awards

Grand Prize *2023.08*

- PNU Industrial Artificial Intelligence Competition

Grand Prize *2023.02*

- Graduation Project in Industrial Engineering, Pusan National University

Conference

Only if the first author and presenter

Multi-task trained Graph Neural Network for Business Process Anomaly Detection with a Limited Number of Labeled Anomalies 2025.09
23rd International Conference on Business Process Management (BPM 2025)

Process-Aware Prediction of Procurement Lead Time for Shipyard Delay Mitigation 2025.07
The 28th International Conference on Production Research (ICPR 28)

Import Container Dwell Time: Analysis of Determinant Factors with Explainable Artificial Intelligence 2023.09
The 11th International Conference on Logistics and Maritime Systems (LOGMS 2023)

Publications

Excluding Korean publications

Multi-task Trained Graph Neural Network for Business Process Anomaly Detection with a Limited Number of Labeled Anomalies Paper 2025.08
Yongjae Lee, Dohee Kim, Donghwan Kim, Hyerim Bae

Identifying Key Factors influencing import container dwell time using eXplainable Artificial Intelligence Paper 2024.12
Yongjae Lee, Kikun Park, Hyunjae Lee, Jongpyo Son, Seonhwan Kim, Hyerim Bae

Predictive Process Monitoring for Remaining Time Prediction with Transfer Learning Paper 2024.08
I.A. Nur, K.I. Mustafa, R.M. Hanif, D. Kim, ***Y. Lee***, H. Bae

Patents

Continual Learning Method and Device with Adaptive Memory Mechanism for Predictive Process Monitoring 2025
Hyerim Bae, Iman Alif Nur, ***Yongjae Lee***, Dohee Kim
Korean Patent, No.10-2025-0026041

Technologies

Languages: Python, JavaScript

Framework: PyTorch, PyTorch Geometric, FastAPI

Simulation: Siemens Plant Simulation

Markup: Markdown, LaTeX, HTML, CSS, XML