

YOUNGMIN KIM

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RESEARCH INTERESTS

Interpretable Machine Learning · Operations Research · Scheduling · Intelligent Manufacturing

EDUCATION

2028 (Expected)	M.S. in Industrial and Systems Engineering Dongguk University, Seoul, Republic of Korea Advisor: Dr. Sungbum Jun
2025	B.S. in Industrial and Systems Engineering Dongguk University, Seoul, Republic of Korea GPA: 3.73/4.00 · Major GPA: 3.86/4.00 · Graduation Honors <i>Selected Major Coursework (A+):</i> Management Science 1, Machine Learning 1, Production & Operations Management, Design and Analysis of Experiment, Advanced Manufacturing Processes, and Logistics

WORKING PAPERS

- [1] **Kim, Y.**, Lee, C., & Jun, S. (2026). BONSAI: A Matheuristic for Depth-Constrained Decision Tree Induction with Multi-Way Splits. *Manuscript submitted to INFORMS Journal on Computing*.
- [2] **Kim, Y.**, Lee, C., & Jun, S. (2026). DWARF: An Evolutionary Discretization Framework for Accurate and Interpretable Depth-Limited Decision Trees. *Manuscript submitted to Swarm and Evolutionary Computation*.

RESEARCH EXPERIENCE

Feb.–Aug. 2026	Data Inspiring Camp — Manufacturing Data Analysis Kia Motors Decision-tree-based anomaly detection for manufacturing inspection data
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INDUSTRY EXPERIENCE

Jul.–Dec. 2024	Production Planning Intern Continental, Sejong, Republic of Korea
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PRESENTATIONS

International Conferences

- [1] **Kim, Y.**, Kim, D., Lee, C., & Jun, S. (2026). Minimizing Total Weighted Tardiness in Parallel Machine Scheduling with Sequence-Dependent Setup Times via Fine-Tuned Large Language Models. *IIE Annual Conference & Expo 2026*, Texas, USA.
- [2] **Kim, Y.**, Lee, C., & Jun, S. (2026). BONSAI: A Matheuristic for Depth-Constrained Decision Tree Induction with Multi-Way Splits. *INFORMS Annual Meeting 2026*, San Francisco, CA, USA. (*Scheduled*)

WORKSHOPS & TRAINING

Jun. 9–11, 2026	SME Week — Smart Manufacturing Training Program Apple Manufacturing R&D Accelerator, POSTECH, Pohang, Republic of Korea
Jan. 26–30, 2026	2025/26 CALOP Winter Lecture Center for Algorithm and Optimization (CALOP), POSTECH, Pohang, Republic of Korea

TECHNICAL SKILLS

Programming: Python · **Optimization:** CPLEX · **Simulation:** Arena · **Typesetting:** LaTeX

AWARDS & SCHOLARSHIPS

- **Dongguk Founding Scholarship, 2nd Cohort** · Full-Tuition Scholarship · 2023–2025
- **Honorable Mention, Undergraduate Student Project Competition** · Korean Institute of Industrial Engineers (KIIE) · Oct. 2024
Optimization of Waste Collection Vehicle Scheduling Using Metaheuristic Algorithms