Yoonsik Jung

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EDUCATION

Mar. 2021 ~ Present	**Korea University** School of Industrial Management Engineering *Advisor: Hong Seo Ryoo* *Ph.D. Student*	Seoul, Korea
Mar. 2014 ~ Feb. 2020	**Dongguk University** Department of Industrial and Systems Engineering *B.S. in Industrial and Systems Engineering*	Seoul, Korea

RESEARCH INTERESTS

- Operations research
- Mathematical optimization
- Smart manufacturing

PUBLICATIONS (SCIE/ESCI)

1. **Yoonsik Jung**,Hyejin Jang,Sunhye Kim, "Explainable AI for Player Retention: Hyper-Personalized Promotions to Prevent Game User Churn", *Under Review*, (2025)

PUBLICATIONS (DOMESTIC)

1. Dongwoo Kang, Sunung Kim, Eunhyo Kim, Sangkyun Noh, Hong Seo Ryoo, Kanguk Lee, **Yoonsik Jung**, "Maintenance Strategy of Semiconductor Equipment under Limited Data Conditions:A Survival Analysis Approach", KOREAN MANAGEMENT SCIENCE REVIEW, (2025)

CONFERENCE PAPERS

- Dongwoo Kang, Sunung Kim, **Yoonsik Jung**, Hong Seo Ryoo, "Generating Interpretable Patterns for Biomedical Image Classification", 2021 IEEE International Conference on Bioinformatics and Biomedicine (BIBM), Virtual (Dec. 2021)

CONFERENCES

1. **Yoonsik Jung**, Hong Seo Ryoo, "An Online Framework for Logical Analysis of Data with Dynamic Cutpoint Generation and Incremental Pattern Refinement", APIEMS & SMILE 2025, Hangzhou, China (Nov. 2025) - Oral

2. **Yoonsik Jung**, Hong Seo Ryoo, "Overcoming Spatial Feature Limitations in Image Classification through Convolutional Logical Analysis of Data", 2024 INFORMS Annual Meeting, Seattle, WA, United States (Oct. 2024) - Oral

3. **Yoonsik Jung**, Hong Seo Ryoo, "Bipartite Graph for Boolean Pattern Recognition", 2023 INFORMS Annual Meeting, Pheonix, AZ, United States (Oct. 2023) - Oral

4. **Yoonsik Jung**, Jeongin Koo, "A Scheduling Algorithm for Reducing Long-Term Work-In-Process Inventory in Battery Formation Process", The 26th Winter Conference of Society for Computational Design and Engineering, Jeju, Korea(2020)

5. **Yoonsik Jung**, Mingi Kang, Jeongin Koo, "A Study on the Tool Wear Estimation Using Discrete Wavelet Transformation and LSTM Networks", KSMPE 2020 Spring Conference, Pyungchang, Korea(2020)

6. Sun Kim, Hanjun Kwon, **Yoonsik Jung**, Jeongin Koo, "Design and Implementation of Machining Process Data preprocessing System", KSMTE Spring Conference 2020, Pyungchang, Korea(2020)

7. **Yoonsik Jung**, Jeongin Koo, "A Development on the Scheduling Algorithm for Automated Logistics in Battery Formation Production", The 25th Winter Conference of Society for Computational Design and Engineering, Pyungchang, Korea(2020)

8. Jeongin Koo, **Yoonsik Jung**, Chanyong Kim, Dongil Kim, "A Study on the Toolwear Estimation Model based on the Machine Learning", KSPE 2019 Fall Conference , Changwon, Korea(2019)

RESEARCH EXPERIENCES

- Researcher at Manufacturing Process Platform R&D Department, Korea Institute of Industrial Technology, Korea (Jul. 2019 ~ Dec. 2020)

AWARDS AND HONORS

- 3rd Prize, Matlab AI Student Challenge, The MahtWorks Korea, Korea (Oct. 2021)

- Award of Merit, Industrial Engineering Project Competition, Korean Institute of Industrial Engineers, Korea (Nov. 2019)

- Award of Distinction, Computer Simulation Competition, The Korea Society for Simulation, Korea (Apr. 2019)

- Award of Merit, Ergonomics Capstone Design Award, Ergonomic Society of Korea, Korea (Nov. 2018)

PROJECTS

- Design of a Life Cycle Management Model for the Advancement of Equipment Parts Management in G-EMS, Samsung Electronics, Korea (Sep. 2023 ~ May. 2024)

- Simulation and Optimization of Logistics Operation of Big Data Base Manufacturing Line, Ministry of Trade, Industry and Energy, Korea (Jul. 2019 ~ Dec. 2020)

- Machinability Diagnosis and Control System based on Deep Learning for Selfoptimized Manufacturing System, Korea Institute of Industrial Technology, Korea (Jul. 2019 ~ Dec. 2020)

- Development of manufacturing big data collection and analytics general purpose platform, Ministry of Trade, Industry and Energy, Korea (Mar. 2020 ~ Aug. 2020)

- A Development on the Integrated Management System of Small and Medium Retail Stores for Service Productivity Innovation, Ministry of Trade, Industry and Energy, Korea (Aug. 2020 ~ Dec. 2020)

TEACHING EXPERIENCES

Teaching Assistant(TA)

- Operations Research I, II (Fall 2021, Spring 2022, Fall 2022, Spring 2023, Fall 2023, Spring 2024)
- Production Planning (Spring 2021)
- Introduction to Programming (Winter 2018, Spring 2019)

SKILLS AND TECHNIQUES

- Programming Languages: C++, Python, Java, R, SQL, Shell Script
- Optimization Tools: Gurobi, Ortools