Dr. Firda Rahmadani (She/Her/Hers)
100062030@ku.ac.ae firdarahmadani.com

EDUCATION

2022-2025   **Khalifa University**   Abu Dhabi, United Arab Emirates
            Ph.D in Engineering
2019-2021   **Kumoh National Institute of Technology**   Gumi, South Korea
            M.Eng. in Industrial Engineering
2011-2015   **University of Brawijaya**   Malang, Indonesia
            B.Eng. in Industrial Engineering

RESEARCH AREAS OF INTEREST

Sepsis, healthcare operations management, healthcare analytics, digital health, human-AI, patient safety

PUBLICATIONS

- **Rahmadani F**, Simsekler MCE, Namwoon Kim, Anwar S,. Assessing the Cost-Effectiveness of *Sepsiscian*: A Human-AI Decision Support Framework for Sepsis Management. 2025. (Manuscript in preparation)

- **Rahmadani F**, Simsekler MCE, Omar MA, Anwar S, Al Shidi AM. *Sepsiscian*: A Human-AI Decision Support Framework for Sepsis Detection and Management. Human-Computer Interaction. 2025. (under review)

- **Rahmadani F**, Simsekler MCE, Namwoon Kim. Combining Expert Knowledge and AI-based Decision Support for Enhanced Healthcare Management: The Case of a New Sepsis Prediction and Treatment System. 2025. (under review)

- **Rahmadani F**, Simsekler MCE, Omar MA, Anwar S, Al Shidi AM. Enhance Patient Safety through AI-driven Decision Support Systems for Sepsis Management: A systematic review and future research agenda. Intelligent Medicine. 2024. (under review)

- Abdelwanis M, Al Absi D, Ouda E, **Rahmadani F**, Simsekler MCE, Sleptchenko A. Variable Neighborhood Search for Rostering Healthcare Providers: A Comprehensive Review and Future Research Agenda. Journal of Heuristics. 2025 (Accepted)

- **Rahmadani F**, Alshamsi FY, Almazrouei B, Hanaya Alsuwaidi A, Alhammadi M, Simsekler MCE. Streamlining Patient Fall Prevention and Management Through Human-Centered AI-Based Decision Support Systems. *Risk Manag Healthc Policy*. 2025;18:3051-3062 https://doi.org/10.2147/RMHP.S516070

- **Rahmadani F.**, Simsekler MCE, Omar MA, M., Al Shidi AM, Anwar S. (2024). Human-centered Prediction Model to Streamline Decision-making In Sepsis Management Pathways. *Proceedings of International Conference on Computers and Industrial Engineering, CIE*, *2024-December*, 1079-1088.

- **Rahmadani F** and Simsekler MCE, "A Path Towards Human-AI Decision-Making in Sepsis Care through Human-Centered Systems-Based Design Approach," *2024 IEEE International Conference on Technology Management, Operations and Decisions (ICTMOD)*, Sharjah, United Arab Emirates, 2024, pp. 1-6, doi: 10.1109/ICTMOD63116.2024.10878191.

- Zaidan S, **Rahmadani F**, Maalouf M, Jelinek HF. "Oxidative Stress Biomarkers in Predictive Multi-Class Modeling of Depression Severity with Diabetes Mellitus, Cardiovascular Disease and Hypertension Comorbidity," *2023 45th Annual International Conference of the IEEE Engineering in Medicine & Biology Society (EMBC)*, Sydney, Australia, 2023, pp. 1-4, https://doi.org/10.1109/embc40787.2023.10339962

- **Rahmadani F** and Hyunsoo Lee, "Hybrid Deep Learning-based Epidemic Prediction Framework of COVID-19: South Korea Case," *Applied Sciences (SCIE)*, Vol. 10, No. 23, 2020, pp.1-21. https://doi.org/10.3390/app10238539

- **Rahmadani F** and Hyunsoo Lee, "Dynamic Model for the Epidemiology of Diarrhea and Simulation considering Multiple Disease Carriers," *International Journal of Environmental Research and Public Health (SCIE)* , Vol. 17, No. 16, 2020, pp. 1-14. https://doi.org/10.3390/ijerph17165692
- **Rahmadani F** and Hyunsoo Lee, "ODE-based Epidemic Network Simulation of Viral Hepatitis A and Kernel Support Vector Machine based Vaccination Effect Analysis," Journal of Korean Institute of Intelligent Systems, Vol. 30, No. 2, 2020, pp. 106-112.

CONFERENCE PARTICIPATIONS

- **Rahmadani F**, Simsekler MCE, Omar MA, Anwar S, Al Shidi AM. Combining Expert Knowledge and AI-Based Decision Support for Enhanced Healthcare Management: The Case of A New Sepsis Prediction and Treatment System. ADIA Lab Symposium. 2025 28 October. Abu Dhabi, United Arab Emirates.
- **Rahmadani F**, Simsekler MCE, Omar MA, Al Shidi AM, Anwar S. Human-Centered Prediction Model to Streamline Decision-Making in Sepsis Management Pathways. CIE 51. 2024 9-11 December. Sydney, Australia.
- **Rahmadani F**, Simsekler MCE, Omar MA, Anwar S, Al Shidi AM. Combining Expert Knowledge and AI-Based Decision Support for Enhanced Healthcare Management: The Case of A New Sepsis Prediction and Treatment System. ADIA Lab Symposium. 2024 20 November. Abu Dhabi, United Arab Emirates.
- **Rahmadani F**, Simsekler MCE, Omar MA, Al Shidi AM, Anwar S. A Path Towards Human-AI Decision-Making in Sepsis Care Through Human-centered Systems-based Design Approach. 6th IEEE ICTMOD. 2024 4-6 November. Sharjah, United Arab Emirates.
- **Rahmadani F**, Simsekler MCE, Omar MA, Anwar S, Al Shidi AM. Combining Expert Knowledge and AI-Based Decision Support for Enhanced Healthcare Management: The Case of A New Sepsis Prediction and Treatment System. SSMC Education Week. 2024. Abu Dhabi, United Arab Emirates.
- **Rahmadani F**, Simsekler MCE, Omar MA, Al Shidi AM, Anwar S. Streamlining Sepsis Operation Pathways using Human-Centered Systems Thinking within the Critical 'Golden Hour.' Proceedings of the Production and Operations Management Conference. 2024. Istanbul, Turkiye.
- **Rahmadani F**, Al Absi D, Simsekler MCE, Omar MA, Al Shidi AM, Anwar S. Streamlining Sepsis care for timely intervention within the Critical 'Golden Hour.' Proceedings of the IISE Annual Conference & Expo 2024. Montreal, Canada.
- **Rahmadani F**, Simsekler MCE, Al Shidi AM, Anwar S. Optimizing Sepsis Management: Precision Medicine Approach for Dynamic Disease Progression. Healthy Aging and Precision Medicine Symposium. 2023 13-14 November. Abu Dhabi, United Arab Emirates.
- **Rahmadani F**, Simsekler MCE, Al Shidi AM, Anwar S. Decision Support Systems for Early Detection and Initial Management of Sepsis. 5th Internal Medicine Update Conference. 2023 13-15 October. Abu Dhabi, United Arab Emirates.
- **Rahmadani F** and Hyunsoo Lee, "Forecast COVID-19 Transmission using Deep Learning based Meta-population Model," Proceedings of KIIS Fall Conference, Vol. 30, No. 2, pp. 166-167, Jeonju, November 28, 2020.
- **Rahmadani F** and Hyunsoo Lee, "Multiple-layered Network for Modeling Transmission of COVID-19 Outbreak," Proceedings of KIIS Spring Conference, Vol. 30, No. 1, pp. 37-38, Seoul, June 27, 2020.
- **Rahmadani F** and Hyunsoo Lee, "Compartment Modeling and Classification of Viral Hepatitis A's Infection using Nonlinear Support Vector Machine," Proceedings of KIIS Autumn Conference, Vol. 29, No. 2, pp. 87-88, Busan, November 02, 2019.

AWARDS

2024   Best Paper Awards – The 51st Conference on Computers & Industrial Engineering   Sydney, Australia
2020   Best Paper Awards - The Conference on Korea Institute Intelligent System   Seoul, South Korea
2019   Best Paper Awards - The Conference on Korea Institute Intelligent System   Busan, South Korea

2017   1st runner up - Nestle Continuous Excellence (NCE) Awards   Pasuruan, Indonesia
        Project "Integrated Total Performance Management (TPM) & Lean Warehousing with External Kanban
        with Supplier to Reduce Working Capital up to 39.4% at Warehouse Nutrition"

SERVICE TO PROFESSION

2024-now   Manuscript Reviewer – BMC Medical Informatics and Decision Making
2023-now   Manuscript Reviewer – Data & Policy
2020-2021 Manuscript Reviewer – MDPI Journal

TEACHING EXPERIENCES

2025   Teaching Assistant for Quality Control and Reliability – Khalifa University
2022-2024   Teaching Assistant for Introduction to Industrial & System Engineering – Khalifa University
2023   Teaching Assistant for Healthcare Analytics & Management – Khalifa University
2022   Teaching Assistant for Production and Operations Management – Khalifa University
2013-2015   Teaching Assistant at Industrial Computer Laboratory – University of Brawijaya

INDUSTRIAL EXPERIENCES

2016-2019   Nestle Indonesia Company – Supervisor of Material Planner
2015-2016   PT. Multi Spunindo Jaya – Management Trainee

LEADERSHIP AND TEAMWORK

2017   Representative of Nestle Indonesia at Visitation of Head Total Performance Management (TPM) & Lean
            Zone AOA (Asia, Oceania, Australia)
            Representative of Nestle Indonesia at Visitation of Head Supply Chain – Nestle Indonesia and
            benchmark from Nestle Thailand

INVITED TALK

2018   University of Brawijaya - Guest speaker of sharing session "PPIC: Challenges in Industrial Practices" at
        the Department of Industrial Engineering

PROFESSIONAL AFFILIATION

Member, Institute of Industrial and Systems Engineers (IISE)
Member, Institute for Operations Research and Management Science (INFORMS)

RESEARCH VISIT

2025   Research visit at the Korea Advanced Institute of Science and Technology (KAIST)   South Korea
2022-2025   Researcher at Sheikh Shakhbout Medical City   United Arab Emirates

ONGOING and PAST COLLABORATIONS