Jongseok Kim

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 Google Scholar

 ● Homepage

 □ +82) 10-3948-5699

PROFILE

- » Research Assistant in Information System Lab, Chungbuk National University.
- » Focusing on Multimodal Learning, Explainable AI and Model Compression.

EDUCATION

» Outstanding Graduate Researcher Award

Chungbuk National University South Korea

» Military Service : Republic of Korea Army (2018/07 – 2020/03)

Work

2025/03 - Present Research Assistant

Information System Lab

♥ Cheongju-si, South Korea

» Multimodal Learning» Signal Processing

Planit Co.,LTD.

♦ Cheongju-si, South Korea

» Medical Imaging Software Development

RESEARCH EXPERIENCE

Ultra Light Weight Machine Learning Technique based on 3D-Imagification

of Heterogeneous Time Series Data for Convergence Services based on IoIT

» Role: 3D Signal Processing Researcher

2022/03 − Present Development of 5G+ Intelligent Basestation Software Modem

Ministry of Science and ICT ♥ South Korea

» Role: Lightweight Deep Learning & Signal Processing Researcher

Integrated Underwater Surveillance Research Center for Future Technology

Adaptation

Ministry of National Defense

South Korea

» Role: Sensor Data Processing & Explainable AI Researcher

Awards & Honors

Chungbuk National University • Cheongju-si, South Korea

* Corresponding Author † Co-first Authors

Submitted Manuscripts

* (Title withheld due to double-blind policy.)
Jongseok Kim[†], Byunghyuk Youn[†], Ohyun Jo*
submitted to IEEE Transactions on Industrial Informatics, Under Review
Impact Factor: 9.9 (JCR Top 4.9%)

» Hybrid Feature Selection for Assessment of Oceanic Channel via Explainable AI Jongseok Kim, Ho-Shin Cho, Ohyun Jo*
Submitted to Journal of Ocean Engineering and Science Major Povision

submitted to **Journal of Ocean Engineering and Science**, Major Revision

Impact Factor: 11.8 (JCR Top 2.0%)

International Conference and Journal Papers

» ComplexRep: Integrating Learned Representations to Enhance Complex-valued Data Transparency

Jongseok Kim, Woonggyu Min, Juyeop Kim, Ohyun Jo* IEEE Internet of Things Journal, 2025 (SCIE), Accepted Impact Factor: 8.9 (JCR Top 4.1%)

» Analysis on Underwater Channel by Using Shapley Additive Explanations Jongseok Kim, Ho-Shin Cho, Ohyun Jo* J-KICS, 2025 (SCOPUS)

» Denoising Method for Wireless Communication Signals Based on Convolutional AutoEncoder

Woonggyu Min, Jongseok Kim, Ohyun Jo*

ICAIIC 2025 (International Conference on Artificial Intelligence in Information and Communication)

» MuShAug: Boosting Sequence Signal Classification via Multishape Augmentation Jongseok Kim, Ohyun Jo*

IEEE Internet of Things Journal, 2024 (SCIE)

Impact Factor: 10.6 (JCR Top 2.2%)

» IncepSeqNet: Advancing Signal Classification with Multi-Shape Augmentations (Student Abstract)

Jongseok Kim, Ohyun Jo*

AAAI 2024 (The 38th Annual AAAI Conference on Artificial Intelligence)

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» Intelligent Index Classification Method Based on Machine Learning for Detection of Reference Signal in 5G Networks

Seungwoo Kang[†], Taegyeom Lee[†], <u>Jongseok Kim</u>, A-reum-saem Lee, Juyeop Kim, Ohyun Jo* IEEE Access, 2023 (SCIE)

Domestic Conference and Journal Papers

» Performance Improvement for 5G DMRS Index Classification by Using Complex Neural Networks

Byunghyuk Youn, Jongseok Kim, Ohyun Jo*

APJCRI 2025

» Exploitation of Deep Learning for Detecting 5G Preamble Signal AReumSaem Lee, <u>Jongseok Kim</u>, Byunghyuk Youn, Ohyun Jo* APICRI 2025

» Complex-Valued Neural Network for Enhancing 5G DMRS Index Classification Byunghyuk Youn, Jongseok Kim, Juyeop Kim, Ohyun Jo*

KICS Winter Conference 2024

» Analysis for Optimizing Sequence Data Augmentation based on Phase Transformation

Jongseok Kim, Ohyun Jo*

APJCRI 2024

» Lightweight Data Processing Scheme based on Machine Learning for 5G DMRS Index Classification

Jongseok Kim, Seungwoo Kang, Ohyun Jo*

APJCRI 2023

» Enhancing Performance for 5G DMRS Signals Classification using Multi-channel based Imagification

Jongseok Kim, Seungwoo Kang, Juyeop Kim, Ohyun Jo*

KICS Summer Conference 2023

» 5G DMRS Data Imagification Method for Efficient Deep Learning-based Index Classification

Jongseok Kim, Seungwoo Kang, Taegyeom Lee, Juyeop Kim, Ohyun Jo*

The 3rd Korea Artificial Intelligence Conference 2022

PATENTS

» Method for Augmenting Time Series Signal Data for Deep Learning and Computing Device for Executing the Method (Application Number: KR10-2024-0071748)
Filed: 2024/05

TEACHING EXPERIENCE

Chungbuk National University

♀ South Korea

- » Operating Systems (Spring 2023)
- » Computer Networks (Spring 2024)

IT SKILLS

C Python Tensorflow Keras Latex

Referee

Dr. Ohyun Jo Professor

m School of Computer Science, Chungbuk National University

Master's Thesis Advisor

Dr. Keon Myung Lee Professor

m School of Computer Science, Chungbuk National University

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Bachelor's Thesis Advisor

Dr. Namil Kim Principal Researcher

m ETRI (Electronics and Telecommunications Research Institute)

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Project Leader