

Daeun Jung

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REASEARCH INTERESTS

Federated Learning, Interpretable Machine Learning, and Machine Unlearning, with an emphasis on:

- Decision-oriented and descriptive representations for federated systems, supporting reliable analysis and intervention under data imbalance and heterogeneity.
- Adaptive and unlearning-aware algorithms that respond to data distribution shifts, outdated information, and changing client populations in federated environments.

EDUCATION

<i>University of Maryland, College Park, MD, USA</i>	Aug. 2022– present
Ph.D. Student, Department of Computer Science (GPA 3.68/4.30)	
• Advisor: Ang Li	
<i>Ewha Womans University, Seoul, South Korea</i>	Mar. 2019–Aug. 2021
M.S., Department of Electronic and Electrical Engineering	
• Thesis: Meta Description Transform for Network Data Analytics	
◦ Advisor: Hyunggon Park	
◦ Laboratory: Multiagent Communications and Networking Lab (MCNL)	
<i>Ewha Womans University, Seoul, South Korea</i>	Mar. 2014–Feb. 2019
B.S. in Engineering, Department of Electronics Engineering	

PUBLICATIONS

Conference

1. Ziyao Wang*, **Daeun Jung***, Yexiao He, Guoheng Sun, Zheyu Shen, Myungjin Lee, Ang Li, **FedMOA: Federated GRPO for Personalized Reasoning LLMs under Heterogeneous Rewards**, *Forty-Third International Conference on Machine Learning (ICML)*, Feb. 02, 2026. (Under-reviewed) [pdf]
2. Joohong Rheey*, **Daeun Jung** and Hyunggon Park, **Impact of Input Data Randomness on Training Performance of Autoencoder**, *The Korean Institute of Communications and Information Sciences (KICS) Summer conference*, Jun. 16, 2021. (Best Paper Awards)
3. Jungmin Kwon*, **Daeun Jung*** and Hyunggon Park, **Traffic Data Classification using Machine Learning Algorithms in SDN Networks**, *Conference on ICT Convergence (ICTC)*, Dec. 21, 2020. (Peer-reviewed) [pdf]
4. **Daeun Jung*** and Hyunggon Park, **An Iterative Algorithm of Key Feature Selection for Multi-class Classification**, *International Conference on Ubiquitous and Future Networks (ICUFN)*, Aug. 22, 2019. (Peer-reviewed) [pdf]

Journal

1. Sunwoo Cho, **Daeun Jung**, Soohwan Lee, Myung-Ki Shin and Hyunggon Park, **Survey on Machine Learning Algorithms for SDN/NFV Automation**, *The Journal of Korea Information and Communications Society*, Jan. 31, 2019. (Submitted)

PROJECTS

Development of Distributed/Cooperated 5G+ Network Data Analytics Functions and Control Technology (Full-Time Researcher)

Ewha Womans University, Seoul, South Korea

Apr. 2021–2022

- Developing an automatic feature extractor of time-series data using partial data distribution change.
- Analyzing the general data attributes extraction by separating raw data into noise and essential parts.
- Language/tool: Python (PyTorch)

Supervised Agile Machine Learning Techniques for Network Automation based on Network Data Analytic Function (Full-Time Researcher)

Ewha Womans University, Seoul, South Korea

Apr. 2019–Dec. 2021

- Collected data via network application and representation development based on network protocol characteristics.
- Improved the accuracy of anomaly detection classification by applying phenotypes to CIDDS open data.
- Language/tool: Python (PyTorch), ONOS, Wireshark

Language-Conditioning Processing System based on Connectionism Model Machine Learning for Age-Related Language Impairment Prediction (Full-Time Researcher)

Ewha Womans University, Seoul, South Korea

Jul. 2019–Dec. 2020

- Implemented the mathematical modeling of linear regression-based mild-cognitive evaluation tests using a language-conditioned processing system.
- Developed item reduction algorithms for the validity of mild-cognitive evaluation tests by comparing item combinations.
- Language/tool: Python, R

EXPERIENCE

Visiting Scholar

Carnegie Mellon University, Pittsburgh, PA, USA

Jan. 2020 – Jul. 2020

- Intensive AI Program fully funded by the Korean government (\$43,435)
 - Processed large-scale multimedia data to generate faseswap based on GAN using AWS
 - Developed a general model for a chatbot based on natural language processing.
 - Language/tool: Python(PyTorch), AWS(EC2), JavaScript

Full-Time Research Intern

Ewha Womans University, Seoul, South Korea

Jun. 2018–Feb. 2019

- Multiagent Communications and Networking Lab
 - Advisor: Hyunggon Park
 - Surveyed the SDN/NFV network architecture and machine learning applications for 5G topology.
 - Extracted key genes through dimensional reduction using clinical breast cancer data.
 - Language/tool: Python, MATLAB, R
- Analog Circuits and Systems Lab
 - Advisor: Sungmin Park
 - Studied electronic circuits used in Lidar and CMOS amplifier for Gigabit Ethernet.

Teaching Assistant

University of Maryland, MD, USA

2022–present

- Advanced Data Structures(CMSC 420), Discrete Structures(CMSC 250), Introduction to Data Science(CMSC 320)
- Conducted discussion session to promote the understanding to implement the algorithm.
- Language/tool: Python, Java

Ewha Womans University, Seoul, South Korea

2019–2020

- Communications Laboratory (35327-01), Embedded System Design and Laboratory (36517-01)

- Conducted after-class lectures to demonstrate the programming assignments' overall algorithms.
- Language/tool: MIPS, C/C++, MATLAB

PATENTS

Daeun Jung and Hyunggon Park, *META DESCRIPTION CONVERSION METHOD FOR NETWORK DATA ANALYSIS AND NETWORK ANALYSIS APPARATUS USING THE SAME*

Korean Intellectual Property Office , filed on Oct, 21, 2021, and issued Jul. 25, 2023(10-2561335).

Daeun Jung and Hyunggon Park, and Jee Eun Sung, *METHOD AND APPARATUS FOR EVALUATION QUESTIONS DETERMINATION*

Korean Intellectual Property Office , filed on Jan, 19, 2022, and issued Jul. 26, 2023(10-2607425).

HONORS & AWARDS

Best Paper Awards The Korean Institute of Communications and Information Sciences (KICS)	2021
Research Assistant Scholarship Ewha Womans University	2020
Admissions Scholarship Ewha Womans University	2019
DEAN'S List Ewha Womans University	2015, Fall 2017, Spring 2018
National Grant Scholarship Ewha Womans University	2015–2018

SKILLS

Python(PyTorch, PyTorch Lightning); Java, C/C++; MATLAB; R; AWS(EC2); L^AT_EX
Korean(Native), English(Advanced)