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Jeimin Jeon

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<https://jeiminjeon.github.io>

RESEARCH INTERESTS

Machine Learning and Computer Vision

- Efficient Model (*e.g.*, NAS, Quantization, Pruning)
- Large Vision-Language Model
- Image Generation

EDUCATION

Yonsei University

(Mar. 2022 – Present)

Ph.D. student

Advisor: Prof. Bumsub Ham

Yonsei University

(Mar. 2016 – Feb. 2022)

B.S. in Electrical and Electronic Engineering

GPA: 4.01/4.3, *Graduated magna cum laude (Top 3%)*

PUBLICATIONS

1. **Jeimin Jeon**, Youngmin Oh, Junghyup Lee, Donghyeon Baek, Dohyung Kim, Chanho Eom, and Bumsub Ham, “Subnet-Aware Dynamic Supernet Training for Neural Architecture Search”, *IEEE Computer Vision and Pattern Recognition (CVPR)*, 2025.
2. Dohyung Kim, Junghyup Lee, **Jeimin Jeon**, Jaehyeon Moon, and Bumsub Ham, “Toward INT4 Fixed-Point Training via Exploring Quantization Error for Gradients”, *European Conference on Computer Vision (ECCV)*, 2024.

PROJECTS

Edge artificial intelligence semiconductor IP development

(Aug. 2023 – Present)

Korea Technology & Information Promotion Agency for SMEs (TIPA)

- Developed quantization and pruning algorithms for In-Memory Computing (IMC) chips.
- Collaborated with hardware teams for efficient HW-SW co-design.
- Built deep learning models for circuit performance prediction and optimization.

Development of Fundamental Technology and Integrated Solution for Next-Generation Automatic Artificial Intelligence System

(Apr. 2022 – Jul. 2023)

Institute for Information & Communications Technology Promotion (IITP)

- Developed neural architecture search (NAS) algorithms for CNNs, ViTs, and quantized models.
- Designed Automatic Loss Function Search algorithms for adaptive optimization.
- Implemented low-bit training techniques for efficient deep learning model training.

PATENTS

International

- Dynamic Supernet Learning Apparatus and Method for Neural Architecture Search
US18799660, Aug. 2024 (Application)

Domestic

- Apparatus and Method for Quantizing Tokens of Vision Transformers
10-2024-0137421, Oct. 2024 (Application)
- Dynamic Supernet Learning Apparatus and Method for Neural Architecture Search
10-2024-0100942, Jul. 2024 (Application)
- Quantization Apparatus and Method for Artificial Neural Network
10-2023-0116857, Sep. 2023 (Application)
- Quantization-Aware Training Apparatus and Method
10-2023-0049837, Apr. 2023 (Application)

EXPERIENCES

- Peer-review Activity

CVPR	2024,2025
ECCV	2024

- Teaching Assistant

Deep Learning Lab (EEE4423): 2022-1, 2024-1, 2025-1
Digital Image Processing (EEE5320): 2023-2
Electrical and Electronic Engineering 101 (EEE2113): 2023-1
SW Programming (YCS-1002): 2021-1