Jeimin Jeon

PhD student @ Computer Vision Lab, Yonsei University

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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. in Electrical and Electronic Engineering
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. Junghyup Lee*, **Jeimin Jeon***, Dohyung Kim, and Bumsub Ham, "Scheduling Weight Transitions for Quantization-Aware Training", *IEEE International Conference on Computer Vision* (**ICCV**), 2025.
2. **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.
3. 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.

Under Review

4. **First Author**. *Transformer Architecture Search with Mixture-of-LoRA Experts*, under review.
5. **Co-Author**. *AccuQuant: Simulating Multiple Denoising Steps for Quantizing Diffusion Models*, under review.

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
NeurIPS	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