

# Seonggon Kim

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## RESEARCH INTEREST

I'm interested in model compression, particularly in enhancing memory efficiency and acceleration of AI through **quantization**. My recent research focuses on **low-precision training** and fine-tuning, which aims to achieve acceleration, memory reduction, and performance maximization during training. I currently focus on **CUDA kernel optimization**.

### KEYWORD

- Quantization
- Low-precision training
- Fully quantized training
- Post-training quantization for LLM
- CUDA Kernel optimization

## EDUCATION

### POSTECH

M.S/Ph.D. in Computer Science and Engineering

Pohang, Korea

Sep. 2023 - Present

### KYUNG HEE UNIVERSITY

B.S. in Computer Science and Engineering

Yongin, Korea

Feb. 2017 - Aug. 2023

## PUBLICATIONS

### HOT: Hadamard-based Optimized Training

**Seonggon Kim**, Juncheol Shin, Seung-taek Woo, Eunhyeok Park  
Computer Vision and Pattern Recognition (**CVPR 2025**), Nashville.

### PTQ4VM: Post-training Quantization for Visual Mamba

Younghyun Cho\*, Changhun Lee\*, **Seonggon Kim**, Eunhyeok Park  
Winter Conference on Applications of Computer Vision (**WACV 2025 Oral**), Tucson.

### Merge-Friendly Post-Training Quantization for Multi-Target Domain Adaptation

Juncheol Shin, Minsang Seok, **Seonggon Kim**, Eunhyeok Park  
International Conference on Machine Learning (**ICML 2025, Under review**), Vancouver.

## EXPERIENCE

### SOFTWARE ENGINEER INTERN

Spirent Communications

Jul. 2022 - Feb. 2023

San Jose, CA, USA

- C++ backend engineer of 5G testing program 'LandSlide'
- C++ backend engineer of 5G analysis program 'Drools'

### SOFTWARE ENGINEER INTERN

Common Computer

Feb. 2022 - Jun. 2022

Seoul, Korea

- Transplanted Dapp 'AI NFT' from Ethereum to Harmony
- Developed smart contract of 'AI NFT' based on ERC-721
- Presented at ETHDenver 2022

### RESEARCH INTERN

SI Analytics

Mar. 2021 - Dec. 2021

Daejeon, Korea

- Semantic segmentation model for land cover classification of Satellite imagery
- Unsupervised, Semi-supervised Learning and Domain Adaptation

## AWARDS & HONORS

- ETHDenver 2022 Blockchain Hackathon, NFT project, 3<sup>rd</sup> Prize Feb. 2022
- CVPR 2021 Earthvision workshop, Land Cover Classification Challenge, Jun. 2021  
Selected as the final five teams

## TEACHING EXPERIENCE

### TEACHING ASSISTANT

POSTECH

Mar. 2025 - June. 2025

Pohang, Korea

- CS311: Computer Architecture [2025-Spring]