

# Cheemun Hong

Ph.D. Candidate

Dept. of Electrical and Computer Engineering, Seoul National University



[cheemun914@snu.ac.kr](mailto:cheemun914@snu.ac.kr)



<https://cheemuhong.github.io>



<https://github.com/Cheemun>



[link](#)

## RESEARCH INTERESTS

---

I am passionate about advancing **efficient AI** to optimize both model training and inference, with the ultimate goal of promoting sustainable AI. My research focuses on developing cutting-edge techniques like **network quantization**, **pruning**, and **test-time adaptation**, aimed at drastically reducing computational costs while maintaining high performance. While much of my work has targeted efficiency improvements in low-level vision tasks like image restoration, my broader goal is to compress large-scale, computationally intensive models—including vision-language and generative models—to move closer to achieving **on-device AI**.

Keywords: *Efficient AI, On-device AI*

## EDUCATION

---

### Seoul National University – Seoul, Korea

*Integrated Ph.D. in Electrical and Computer Engineering, Mar. 2020 - Present*

Advisor: Prof. Kyoung Mu Lee

### Seoul National University – Seoul, Korea

*B.S. in Electrical and Computer Engineering, Mar. 2015 - Feb. 2020*

### University of Applied Sciences and Arts Northwestern Switzerland – Switzerland

*Exchange Student in Computer Science, Fall 2017*

## PUBLICATIONS

---

### [International Conferences]

#### **Diversity, Plausibility, and Difficulty: Dynamic Data-Free Quantization**

Cheemun Hong<sup>\*</sup>, Sungyong Baik<sup>\*</sup>, Junghun Oh, and Kyoung Mu Lee, In Winter Conference on Applications of Computer Vision (**WACV**), 2025.

#### **Overcoming Distribution Mismatch in Quantizing Image Super-Resolution Networks**

Cheemun Hong and Kyoung Mu Lee, In European Conference on Computer Vision (**ECCV**), 2024.

#### **AdaBM: On-the-Fly Adaptive Bit Mapping for Image Super-Resolution**

Cheemun Hong and Kyoung Mu Lee, In Conference on Computer Vision and Pattern Recognition (**CVPR**), 2024.

#### **Content-Aware Dynamic Quantization for Image Super-Resolution**

Cheemun Hong, Sungyong Baik, Heewon Kim, Seungjun Nah, and Kyoung Mu Lee, In European Conference on Computer Vision (**ECCV**), 2022.

## Attentive Fine-Grained Structured Sparsity for Image Restoration

Junghun Oh, Heewon Kim, Seungjun Nah, [Cheeun Hong](#), Jonghyun Choi, and Kyoung Mu Lee, In Conference on Computer Vision and Pattern Recognition (CVPR), 2022.

## DAQ: Channel-Wise Distribution-Aware Quantization for Deep Image Super-Resolution Networks

[Cheeun Hong](#)<sup>\*</sup>, Heewon Kim<sup>\*</sup>, Sungyong Baik, Junghun Oh, and Kyoung Mu Lee, In Winter Conference on Applications of Computer Vision (WACV), 2022.

## Batch Normalization Tells You Which Filter is Important

Junghun Oh, Heewon Kim, Sungyong Baik, [Cheeun Hong](#), and Kyoung Mu Lee, In Winter Conference on Applications of Computer Vision (WACV), 2022.

## [Journals]

### CoLaNet: Adaptive Context and Latent Information Blending for Face Image Inpainting

JoonKyu Park, [Cheeun Hong](#), Sungyong Baik, and Kyoung Mu Lee, IEEE Signal Processing Letters, 2023.

## ACADEMIC EXPERIENCES

---

- Served as a reviewer for CVPR (2022, 2023, 2024), ICCV (2023), ECCV (2022, 2024), TNNLS
- Transferred technology **Fast Deep Super-Resolution Algorithm**, SNU R&DB, 2021

## AWARDS & HONORS

---

- **Youlchon AI Star Scholarship** (~ \$6000) 2024
- **Best Paper Award at IPIU 2021** (33rd Workshop on Image Processing and Image Understanding) 2021
- **The Grand Prize at Hynix Internship Program** 2018

## TALKS

---

- **AIIS Fall Retreat, SNU** (“Content-Aware Dynamic Quantization for Image Super-Resolution”) 2022

## INTERNSHIP

---

### Machine Intelligence and Pattern Analysis Lab (MIPAL) – Seoul National University, Korea

Student Intern, Jun. 2019 - Aug. 2019

Mentor: Prof. Nojun Kwak

### DRAM circuit design team – SK Hynix, Korea

Engineering Intern, Jun. 2018 - Aug. 2018

## Teaching Experience

---

### Seoul National University

Teaching Assistant in *Recent Trends in Computer Vision*, Spring 2022

Teaching Assistant in *Introduction to Computer Vision*, Spring 2022

## REFERENCES

---

**Advisor** **Kyoung Mu Lee**

Professor

Seoul National University

kyoungmu@snu.ac.kr

<https://cv.snu.ac.kr/index.php/kmlee>

---