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Cheeun Hong

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link

RESEARCH INTERESTS

I am interested in **green deep learning** that considers energy usage and carbon emissions during model training and inference. Among the various lightweight technologies, I mainly focus on **efficient inference** approaches such as **network quantization and pruning**. While my interest is in compressing any deep learning model with massive computations, my latest projects focus on compressing models for **low-level image restoration** problems.

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

Content-Aware Dynamic Quantization for Image Super-Resolution

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

[Citations: 8 | Acceptance rate: 28.0%]

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.

[Citations: 9 | Acceptance rate: 25.3%]

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

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

[Citations: 22 | Acceptance rate: 35.0%]

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.

[Citations: 5 | Acceptance rate: 35.0%]

Overcoming Distribution Mismatch in Quantizing Image Super-Resolution Networks

Cheeun Hong and Kyoung Mu Lee, Submitted for publication.

DynaDFQ: Difficulty-Aware Dynamic Data-Free Quantization

Cheeun Hong*, Junghun Oh*, and Kyoung Mu Lee, Submitted for publication.

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

JoonKyu Park, Cheeun Hong, Sungyong Baik, and Kyoung Mu Lee, Submitted for publication.

ACADEMIC EXPERIENCES

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

AWARDS

- **Best Paper Award at IPIU 2021** (33rd Workshop on Image Processing and Image Understanding) 2021
- **The Grand Prize at Hynix Internship Program** 2018

INTERNSHIP

Machine Intelligence and Pattern Analysis Lab (MIPAL) – Seoul National University, Korea
Student Intern, Jun. 2019 - Aug. 2019
Mentor: Prof. Nojun Kwak

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**
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Seoul National University
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