

Byungwan Son

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RESEARCH INTERESTS

Machine Learning and Computer Vision

- Image generation
- Data-efficient learning (*e.g.*, dataset distillation)
- Model efficiency (*e.g.*, network quantization, knowledge distillation)

EDUCATION

Yonsei University (Mar. 2023 – Present)

Ph.D. student

Advisor: Prof. Bumsub Ham

Yonsei University (Mar. 2017 – Feb. 2023)

B.S. in Electrical and Electronic Engineering

PUBLICATIONS

* indicates equal contribution.

1. Yun Kim, Banseok Kim, **Byungwan Son**, Bumsub Ham, “Every Failure is a Step Towards Success: Exploiting Hard Samples for Dataset Distillation”, *in Progress*.
2. Seunghoon Lee*, Jeongwoo Choi*, **Byungwan Son**, Jaehyeon Moon, Jeimin Jeon, Bumsub Ham, “AccuQuant: Simulating Sampling Processes for Quantizing Diffusion Models”, *under Review*.
3. **Byungwan Son**, Youngmin Oh, Donghyeon Baek, Bumsub Ham, “FYI: Flip Your Images for Dataset Distillation”, *European Conference on Computer Vision*, 2024.
4. Taemin Kim, Yejee Shin, Kyowon Kang, Kiho Kim, Gwanho Kim, Yunsu Byeon, Hwayeon Kim, Yuyan Gao, Jeong Ryong Lee, Geonhui Son, Taeseong Kim, Yohan Jun, Jihyun Kim, Jinyoung Lee, Seyun Um, Yoohwan Kwon, **Byungwan Son**, Myeongki Cho, Mingyu Sang, Jongwoon Shin, Kyubeen Kim, Jungmin Suh, Heekyeong Choi, Seokjun Hong, Huanyu Cheng, Hong-Goo Kang, Dosik Hwang, Ki Jun Yu, “Ultrathin crystalline-silicon-based strain gauges with deep learning algorithms for silent speech interfaces”, *Nature Communications*, 2022.

EXPERIENCES

- Peer-review

IJCV 2024

- Teaching Assistant

Deep Learning Lab (2024-1, 2025-1)

Introduction Artificial Intelligence (2023-2)

Electrical and Electronic Engineering 101 (2023-1)

Engineering Information Processing (2018-2)

- Internship

CV Lab, Yonsei University, Seoul, Korea (Jan. 2022 – Feb. 2023)

Research Intern advised by Prof. Bumsub Ham

DSP & AI Lab, Yonsei University, Seoul, Korea (Jul. 2021 – Sep. 2021)

Research Intern advised by Prof. Hong-Goo Kang

PROJECTS

Development of Fundamental Technology and Integrated Solution for Next-Generation Automatic Artificial Intelligence System (Mar. 2023 – Present)

Institute for Information & Communications Technology Promotion (IITP)