

EDUCATION

Carnegie Mellon University	Pittsburgh, U.S.	2022 Fall
• Visiting Scholar in an AI-related project-focused intensive program, fully funded by the Korean Government.		
Seoul National University	Seoul, Korea	2020 Fall – 2023 Fall
• M.S. in the Department of Electrical and Computer Engineering. Advisor: Bohyung Han		
Seoul National University	Seoul, Korea	2013 – 2019
• Department of Liberal Studies, Summa Cum Laude (1st out of 35)		
– B.S. in the Department of Electrical and Computer Engineering		
– B.S. in Technology Management		
Korea Science Academy of KAIST	Busan, Korea	2010 – 2012

PUBLICATIONS

- **Dong-Hwan Jang**, Sangdoo Yun, and Dongyoon Han. “Model Stock: All We Need is just a few Fine-Tuned Models,” *ECCV 2024 (Oral, Top 8.35% among accepted papers)*. [link]
- Taehoon Kim, **Dong-Hwan Jang**, and Bohyung Han. “Merge and Bound: Direct Manipulations on Weights for Class Incremental Learning,” *CVPR Workshop on Continual Learning in Computer Vision, 2024*. [link]
- **Dong-Hwan Jang**, Sanghyeok Chu, Joonhyuk Kim, and Bohyung Han. “Pooling Revisited: Your Receptive Field is Suboptimal,” *CVPR 2022*. [link]
- Jimi Kim*, Seojin Jang*, Woncheol Lee*, Joong Kun Lee*, and **Dong-Hwan Jang***. “DS4C Patient Policy Province Dataset: a Comprehensive COVID-19 Dataset for Causal and Epidemiological Analysis,” *NeurIPS Workshop 2020*. (* indicates equal contributions) [link]

TECHNICAL EXPERIENCES

Academic Projects

- **DynOPool - Pooling Revisited: Your Receptive Field is Suboptimal** challenges conventional neural network design methodologies, introducing a novel pooling layer.
 - Focused on optimizing the network structure in a differentiable way to minimize inductive bias.
 - Resulted in a significant publication (detailed in the Publications section).
- **Implicit Neural Representation for Motion Deblur** employs spatially-variant motion deblur based on Implicit Neural Representation.
 - A spatially-variant deblurring network takes deformed features and their offsets as inputs.
 - It shows superior performance to the state-of-the-art methods on the restoration of downsampled and motion-blurred images.
 - *U.S. Patent Application Number: 17/973,809 (in progress)*
- **Model Stock: A Novel Weight Merging Method for Fine-tuning Pretrained Models** introduces a powerful approach to improve model performance by merging weights from different random seeds.
 - Unveils geometric patterns of fine-tuned models residing on a thin shell. Utilizing this discovery, we developed a novel weight merging method that markedly enhances model robustness and performance.
 - Provides new insights into weight merging, highlighting an underexplored area of model optimization.
 - Currently expanding this method to encompass weights fine-tuned under various configurations, broadening its applicability and potential impact.

Personal Project

- **Dataset for COVID-19 (DS4C)**: Created the world’s 3rd most impactful COVID-19 dataset with fine-grained patient-level data and policy-level data [Kaggle]
 - The dataset is used by researchers from all over the world to study the impact of policies on COVID-19 spread..
 - Interview article about NeurIPS workshop paper with AITimes [Korean] [English (auto-translated)]

INVITED TALKS

Korean Conference on Computer Vision	Seoul, Korea	2022
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- 20 minutes oral presentation (top 23.5% among published papers) on CVPR paper “Pooling Revisited: Your Receptive Field is Suboptimal” presented by prof. Bohyung Han

Databricks Invited Talk **San Francisco, U.S. (remote)** **2020**
 • 1 hour talk on “The Complexities around COVID-19 Data” invited as DS4C team [link]

SCHOLARSHIPS & AWARD

Government Scholarship for Overseas Study	Korea Government	2023 – 2024
<ul style="list-style-type: none"> • Awarded a prestigious scholarship intended for international Ph.D. programs, recognizing top 64 candidates across all majors in South Korea. (Note: Scholarship was not utilized due to non-admittance into the program.) 		
OnDream Global Scholarship Award	Hyundai Chung Mong-Koo Foundation	2022
<ul style="list-style-type: none"> • Award Prize - around <i>USD 2,350</i> • For the paper “Pooling Revisited: Your Receptive Field is Suboptimal” at CVPR 2022 		
OnDream Future Technology Scholarship	Hyundai Chung Mong-Koo Foundation	2021 – 2022
<ul style="list-style-type: none"> • Covers full tuition & financial support. 		
National Scholarship for Science and Engineering	Korea Student Aid Foundation	2015 – 2016
<ul style="list-style-type: none"> • Covers full tuition. 		

EMPLOYMENT

Research Engineer	Samsung Adv. Institute of Tech, Korea	2024 January–Present
<ul style="list-style-type: none"> • Conducting advanced research in deep learning and fine-tuning techniques. • Serving as a research engineer focusing on AI research and development in the semiconductor domain. 		
Backbone Research Intern	NAVER AI Cloud, Korea	2023 July–December
<ul style="list-style-type: none"> • Conducted research on robust fine-tuning based on weight merging and proposed a novel method, “Model Stock.” • Advised by Dongyoon Han and Sangdoo Yun. 		
Research Scientist	Mind’s Lab, Korea	2019
<ul style="list-style-type: none"> • Conducted low-level vision research, which included: <ul style="list-style-type: none"> – Weakly-supervised segmentation based on inpainting. – Colorization of grayscale images using spatially-adaptive denormalization. • Engaged in a month-long project at Alberta Machine Intelligence Institute, Canada (May 2019). • This role was part of fulfilling South Korean mandatory military service duty. 		
Software Engineer	TNC Technology, Korea	2017–2018
<ul style="list-style-type: none"> • Developed a Java-based payment gateway server for the company’s clients. • This role was part of fulfilling South Korean mandatory military service duty. 		

TEACHING EXPERIENCES

- Teaching Assistant for *430.329: Introduction to Algorithms* at Seoul National University (Fall 2020)
- Teaching Assistant for *Samsung AI Expert Course* at Seoul National University (July 2019)
- Teaching Assistant for *Hyundai Motors AI Expert Course* at Seoul National University (Jan 2019)

EXTRACURRICULAR ACTIVITIES

- NeurIPS 2022, 2023 reviewer, CVPR 2023 reviewer
- Deepest: Seoul National University’s AI club (2019 – 2020)