Curriculum Vitae - Resume
http://donghwanjang.github.io

Dong-Hwan Jang

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Education

University of Illinois Urbana-Champaign — **Urbana-Champaign, U.S.** — **Fall 2025 – Present**
- Ph.D. Student in Computer Science

Carnegie Mellon University — **Pittsburgh, U.S.** — **Fall 2022**
- Visiting Scholar in an AI-related project-focused intensive program, fully funded by the Korean Government.

Seoul National University — **Seoul, Korea** — **Fall 2020 – Fall 2023**
- 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, ranked 1st in class**
  - B.S. in the Department of Electrical and Computer Engineering
  - B.S. in Technology Management

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 2.3% among submitted 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 & Industrial Projects
- **Anomaly Detection in Semiconductor Manufacturing:** Built a robust semi-supervised framework for wafer-level defect detection using self-supervised learning and distribution-shift analysis, achieving a substantially reducing false positives.
- **Model Stock: A Novel Weight Merging Method for Fine-tuning:** Proposed a weight-averaging approach revealing geometric consistency among fine-tuned models, improving robustness and generalization across configurations.
- **DynOPool – Pooling Revisited:** Developed a differentiable pooling layer that optimizes receptive fields, minimizing inductive bias in CNN architectures.
- **Implicit Neural Representation for Motion Deblur:** Designed a spatially-variant deblurring network using implicit representations, outperforming state-of-the-art methods on degraded images. *(U.S. Patent Application No. 17/973,809)*

Personal Project
- **Dataset for COVID-19 (DS4C):** Created the world's 3rd most impactful COVID-19 dataset with fine-grained patient- and policy-level data [Kaggle], supporting global research on policy impact and epidemiology. Featured in an interview with AITimes [Korean] [English].

Employment

Research Engineer — **Samsung AI Center, Korea** — **Jan 2024 – Aug 2025**
- Conducted advanced research on deep learning and fine-tuning techniques for semiconductor manufacturing.
- Developed an unsupervised anomaly detection framework for wafer inspection using distribution-shift analysis and semi-supervised learning, reducing false positives and improving detection reliability.
- Collaborated with cross-functional AI and semiconductor process teams to integrate research outcomes into production-scale systems.

Backbone Research Intern — **NAVER AI Cloud, Korea** — **Jul 2023 – Dec 2023**
- Researched robust fine-tuning via weight merging and proposed a novel method, *Model Stock*.
- Advised by Dongyoon Han and Sangdoo Yun.

Research Scientist **Mind's Lab, Korea** **2019**
- Conducted low-level vision research including weakly supervised segmentation and spatially adaptive colorization.
- Participated in a one-month collaborative project at Alberta Machine Intelligence Institute (Amii), Canada.
- Fulfilled mandatory military service duty through this research role.

Software Engineer **TNC Technology, Korea** **2017 – 2018**
- Developed a Java-based payment gateway server for corporate clients.
- Fulfilled South Korean military service duty.

Scholarships & Award

Study Abroad Scholarship **Kwanjeong Educational Foundation** **2025 – 2029 (Expected)**
- Prestigious scholarship providing USD 25,000 per year to support overseas Ph.D. study at UIUC.

Government Scholarship for Overseas Study **Korea Government** **2023 – 2024**
- Awarded a prestigious scholarship intended for international Ph.D. programs, recognizing top 56 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**
- Award prize of approximately *USD 2,350*
- For the paper "Pooling Revisited: Your Receptive Field is Suboptimal" at CVPR 2022

OnDream Future Technology Scholarship **Hyundai Chung Mong-Koo Foundation** **2021 – 2022**
- Covers full tuition and financial support.

National Scholarship for Science and Engineering **Korea Student Aid Foundation** **2015 – 2016**
- Covers full tuition.

Invited Talks

Korean Conference on Computer Vision **Seoul, Korea** **2022**
- 20-minute 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**
- One-hour invited talk on "The Complexities around COVID-19 Data" invited as DS4C team [link]

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)