Kanghyun Choi

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Dept. of Electrical and Computer Engineering
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Research Interests

Data-free Neural Network Compression, Neural Architecture Search, Generative Neural Network

Education

- **Seoul National University** — Seoul, Korea
  Ph.D. Student, Electrical and Computer Engineering, GPA 4.30/4.3 — *September 2023 - Present*
- **Yonsei University** — Seoul, Korea
  M.S. in Computer Science, GPA 4.20/4.3 — *September 2020 - August 2023*
- **Yonsei University** — Seoul, Korea
  B.S. in Computer Science, GPA 3.81/4.3 — *March 2016 - August 2020*
- **American University** — Washington D.C., USA
  Study Abroad Program, Computer Science — *January 2019 - May 2019*

Publications

Jaewon Jung, Jaeyong Song, Hongsun Jang, Hyeyoon Lee, **Kanghyun Choi**, Noseong Park, Jinho Lee, "Fast Adversarial Training with Dynamic Batch-level Attack Control", DAC 2023

Kanghyun Choi, Hyeyoon Lee, Deokki Hong, Joonsang Yu, Noseong Park, Youngsok Kim, Jinho Lee, "It's All In the Teacher: Zero-Shot Quantization Brought Closer to the Teacher", CVPR 2022, **Oral presentation**

Deokki Hong, **Kanghyun Choi**, Hyeyoon Lee, Joonsang Yu, Noseong Park, Youngsok Kim, Jinho Lee, "Enabling Hard Constraints in Differentiable Neural Network and Accelerator Co-Exploration", DAC 2022

Kanghyun Choi, Deokki Hong, Noseong Park, Youngsok Kim, Jinho Lee, "Qimera: Data-free Quantization with Synthetic Boundary Supporting Samples", NeurIPS 2021

Kanghyun Choi[1], Deokki Hong[1], Hojae Yoon[1], Joonsang Yu, Youngsok Kim, Jinho Lee, "DANCE: Differentiable Accelerator/Network Co-Exploration", DAC 2021

Projects

- **Accelerating Diffusion Models for Landscape Generation** — *2023*
  Electronics and Telecommunications Research Institute (ETRI)
- **Semantic Modification Method for High-resolution Face Images** — *2022*
  Electronics and Telecommunications Research Institute (ETRI)
- **High-resolution Face Image Generation by Transformer-based GAN** — *2021*
  Electronics and Telecommunications Research Institute (ETRI)
- **Fast Distributed Deep Neural Network Training** — *2020*
  Korea Institute of Industrial Technology (KITECH)

Awards

- **The 28th Samsung Humantech Paper Award**: February 2022
  Silver Prize, Computer Science and Engineering
- **High Honors at Graduation**: August 2020

Teaching Experience

- **Digital System Design and Practice (430.315A)**: Teaching Assistant, Fall 2023
- **Multi-core and GPU Programming (CSI4119)**: Teaching Assistant, Spring 2021, 2022
- **Logic Circuit Design (CSI2111)**: Teaching Assistant, Fall 2020

Academic Services

- **Conference Reviewer**: CVPR (2023,2024), ICCV (2023), ECCV (2024)

Skills

- **Python, C, C++, LaTeX**
- **Pytorch, Tensorflow, Pandas, SciPy**
- **Korean** (Native), **English** (Fluent), **Japanese** (Intermediate)