Hongsun Jang

Accelerated Intelligent Systems Lab (AISys)

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Advisor : Jinho Lee (leejinho@snu.ac.kr)

EDUCATION

- **Seoul National University** Seoul, Korea (Republic of)
  Integrated M.S./ Ph.D. in Electrical & Computer Engineering; GPA: 3.86/4.3 *March 2023 - Present*

- **Yonsei University** Seoul, Korea (Republic of)
  B.S. in Computer Science; GPA: 3.69/4.3 *Mar 2017 - Aug 2022*

  Courses: *Multi-core and GPU Programming, Computer Architecture, Operating System, Advanced algorithms, Machine Learning*

RESEARCH INTEREST

Distributed Deep Learning, Near-Storage Processing, FPGA, Large Language Models (LLMs)

PUBLICATIONS

"Smart-Infinity: Fast Large Language Model Training using Near-Storage Processing on a Real System"
[*HPCA'24,* ***Best Paper Award-Honorable Mention***]
Hongsun Jang, Jaeyong Song, Jaewon Jung, Jaeyoung Park, Youngsok Kim, and Jinho Lee

"Pipette: Automatic Fine-Grained Large Language Model Training Configurator for Real-World Clusters"
[*DATE'24*] (to appear)
Jinkyu Yim[1], Jaeyong Song[1], Yerim Choi, Jaebeen Lee, Jaewon Jung, **Hongsun Jang**, and Jinho Lee*

"GraNNDis: Efficient Unified Distributed Training Framework for Deep GNNs on Large Clusters"
[*arXiv'23*], [arXiv]
Jaeyong Song, **Hongsun Jang**, Jaewon Jung, Youngsok Kim, and Jinho Lee

"Fast Adversarial Training with Dynamic Batch-level Attack Control"
[*DAC'23*], [paper]
Jaewon Jung, Jaeyong Song, **Hongsun Jang**, Hyeyoon Lee, Kanghyun Choi, Noseong Park, and Jinho Lee,

"Pipe-BD: Pipelined Parallel Blcokwise Distillation"
[*DATE'23*], [paper], [arXiv], [code]
Hongsun Jang, Jaewon Jung, Jaeyong Song, Joonsang Yu, Youngsok Kim, and Jinho Lee

"Optimus-CC: Efficient Large NLP Model Training with 3D Parallelism Aware Communication Compression"
[*ASPLOS'23*], [paper], [arXiv]
Jaeyong Song[1], Jinkyu Yim[1], Jaewon Jung, **Hongsun Jang**, Hyung-jin Kim, Youngsok Kim, and Jinho Lee

HONORS AND AWARDS

- **The 30th IEEE International Symposium on High-Performance Computer Architecture** : March 2024
  Best Paper Award-Honorable Mention

- **The 30th Samsung Humantech Paper Award**: February 2024
  Participation Prize, Computer Science and Engineering

- Academic Excellence Award, Seoul National University (2023-1)

- Academic Excellence Award, Yonsei University (2022-2)

- Second Prize at Software Capstone Design, Yonsei University (2022-2, 2022-1)

EXPERIENCE

- **Samsung Electronics, Memory Solutions Team**
  Engineering Internship (manager: Gitae Na) *May 2021 - Jun 2021*

- **Eugene Investment & Futures, Information Technology Team**
  Field Practice Intern (manager: Manwoo Jang, Eunchang Choi) *Jan 2021 - Feb 2021*

Teaching Experience

- **Digital System Design and Practices (430.315A)**

  Teaching Assistant, Fall 2023

- **Programming Methodology (430.211)**

  Teaching Assistant, Spring 2023