Hongsun Jang

Accelerated Intelligent Systems Lab (AISys)

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EDUCATION

- **Seoul National University**   Seoul, Korea (Republic of)
  Integrated M.S./ Ph.D. in Electrical & Computer Engineering; GPA: 3.95/4.3   *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

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

PUBLICATIONS

"GraNNDis: Efficient Unified Distributed Training Framework for Deep GNNs on Large Clusters"
[*PACT'24, to appear*], [arXiv]
Jaeyong Song, **Hongsun Jang**, Jaewon Jung, Youngsok Kim, and Jinho Lee

"PeerAiD: Improving Adversarial Distillation from a Specialized Peer Tutor"
[*CVPR'24*], [paper]
Jaewon Jung, **Hongsun Jang**, Jaeyong Song, and Jinho Lee

"Smart-Infinity: Fast Large Language Model Training using Near-Storage Processing on a Real System"
[*HPCA'24, accept ratio=18% (75 out of 410)*, ***Best Paper Award-Honorable Mention***] [paper]
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*], [paper]
Jinkyu Yim[1], Jaeyong Song[1], Yerim Choi, Jaebeen Lee, Jaewon Jung, **Hongsun Jang**, 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, accept ratio=25%*], [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

- **Best Paper Award-Honorable Mention in HPCA 2024 (top 3 out of 410)**
  The 30th IEEE International Symposium on High-Performance Computer Architecture, Edinbergh, March 2024

- **Participation Prize in the 30th Samsung Humantech Paper Award (top 115 out of 1,189)**
  Computer Science and Engineering, February 2024

- 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)

SCHOLARSHIP

- **The 1th Graduate School Presidential Science Scholarship, Republic of Korea (top 120 out of 2,980)**

- IEEE Technical Committee on Computer Communication (TCCC) travel grant for HPCA 2024

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