# Donghyun Lee

**CONTACT INFORMATION**

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**EDUCATION**

*Seoul National University* — Mar. 2022 - Present
***M.S./Ph.D.*** *Student in Computer Science and Engineering* — Seoul, Korea

- Advisor: Professor Jae W. Lee

*Yonsei University* — Mar. 2018 - Feb. 2022
***Bachelor of Science*** *in Electrical and Electronic Engineering* — Seoul, Korea

- *Awarded Highest Honors at Graduation* (GPA: 4.14 / 4.30)

**RESEARCH INTERESTS**

System for ML, HW/SW optimization for emerging AI applications, GPU kernel optimization

**PUBLICATIONS**

**GS-Scale: Unlocking Large-Scale 3D Gaussian Splatting Training via Host Offloading**
**Donghyun Lee**, Dawoon Jeong, Jae W. Lee, and Hongil Yoon
31st ACM International Conference on Architectural Support for Programming Languages and Operating Systems (ASPLOS), 2026 (Under review)

**FastPoint: Accelerating 3D Point Cloud Model Inference via Sample Point Distance Prediction**
**Donghyun Lee**, Dawoon Jeong, Jae W. Lee, and Hongil Yoon
IEEE/CVF International Conference on Computer Vision (**ICCV**), Honolulu, Hawaii, October 2025

**FACIL: Flexible DRAM Address Mapping for SoC-PIM Cooperative On-device LLM Inference**
Seong Hoon Seo, Junghoon Kim, **Donghyun Lee**, Seonah Yoo, Seokwon Moon, Yeonhong Park, and Jae W. Lee
The 31st IEEE International Symposium on High Performance Computer Architecture (**HPCA**), Las Vegas, NV, March 2025.

**Frugal 3D Point Cloud Model Training via Progressive Near Point Filtering and Fused Aggregation**
**Donghyun Lee**, Yejin Lee, Jae W. Lee, and Hongil Yoon
European Conference on Computer Vision (**ECCV**), Milan, Italy, September 2024.

**Liquid: Mix-and-Match Multiple Image Formats to Balance DNN Training Pipeline**
Woohyeon Baek*, Jonghyun Bae*, **Donghyun Lee**, Hyunwoong Bae, Yeonhong Park, and Jae W. Lee
14th ACM SIGOPS Asia-Pacific Workshop on Systems (**APSys**), Seoul, South Korea, August 2023.

**Not All Neighbors Matter: Point Distribution-Aware Pruning for 3D Point Cloud**
Yejin Lee, **Donghyun Lee**, JungUk Hong, Jae W. Lee, and Hongil Yoon
37th AAAI Conference on Artificial Intelligence (**AAAI**), Washington, DC, February 2023.

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| **TEACHING EXPERIENCE** | ***Computer Architecture (Instructor: Prof. Jae W. Lee)***<br>*Seoul National University, Sep. - Dec. 2023 Teaching Assistant*<br>• Undergraduate course taught in English |
| **COMMUNITY SERVICE** | ***Student Volunteer***, *International Symposium on Code Generation and Optimization 2022* |
| **INTERNSHIPS** | ***Undergraduate Student Intern***            Jul. - Aug. 2021<br>*Architecture and Code Optimization Lab (ARC Lab)*     Seoul, Korea<br>• Implement block-sparse GEMM CUDA kernel for sparse DNN training<br><br>***Undergraduate Student Intern***       Apr. 2020 - Jun. 2021<br>*Compiler Research Laboratory (Corelab)*     Seoul, Korea<br>• Contributed to FlexC graph compiler project |
| **HONORS AND AWARDS** | ***The 31st Samsung Humantech Paper Award: Encouragement Prize***,<br>Samsung Electronics Co., Ltd.<br><br>***2024 Accelerator Programming Winter School***, *CUDA competition*, $1^{st}$ place,<br>SNU THUNDER Research Group & Manycoresoft<br><br>***Highest Honors at Graduation (Top 1% of class)***, Yonsei University |
| **COMPUTER SKILLS** | ***Launguages:***  C/C++, CUDA, Verilog, Python<br>***Applications/Frameworks:***  Pytorch, Tensorflow, MLX |