

# Jungi Lee

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## RESEARCH INTERESTS

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Computer Architecture, Microarchitecture for Emerging Workloads, Efficient AI Systems

## EDUCATION

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Seoul National University, Seoul, Republic of Korea

03/2023 - Present

M.S./Ph.D. in Electrical and Computer Engineering

Computer Architecture and Systems Lab (Advisor: Prof. Jaewoong Sim)

Seoul National University, Seoul, Republic of Korea

03/2017 - 02/2023

B.S. in Electrical and Computer Engineering

GPA: 3.87/4.30, major GPA: 3.98/4.30

## PROJECTS

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- **Large Language Model inference accelerator system through algorithm-hardware co-design**
  - Low bit inference resulting in up to  $2.63\times$  speedup on average over other accelerators with higher accuracy.
- **Dynamic key-value cache management solution for efficient generative inference in large language model**
  - Novel KV cache management framework that provides scalability under long-text generation, while providing up to  $3.00\times$  speedup over other management methods.

## PUBLICATIONS

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[OSDI '24] **InfiniGen: Efficient Generative Inference of Large Language Models with Dynamic KV Cache Management**

Wonbeom Lee\*, Jungi Lee\*, Junghwan Seo, and Jaewoong Sim

Proceedings of the 18th USENIX Symposium on Operating Systems Design and Implementation (OSDI), 2024

[ISCA '24] **Tender: Accelerating Large Language Models via Tensor Decomposition and Runtime Requantization**  
Jungi Lee\*, Wonbeom Lee\*, and Jaewoong Sim

Proceedings of the 51st ACM/IEEE International Symposium on Computer Architecture (ISCA), 2024

[ASPLOS '24] **GSCore: Efficient Radiance Field Rendering via Architectural Support for 3D Gaussian Splatting**  
Junseo Lee, Seokwon Lee, Jungi Lee, Junyong Park, and Jaewoong Sim

Proceedings of the 2024 International Conference on Architectural Support for Programming Languages and Operating Systems (ASPLOS), 2024

[ISCA '23] **NeuRex: A Case for Neural Rendering Acceleration**

Junseo Lee, Kwanseok Choi, Jungi Lee, Seokwon Lee, Joonho Whangbo, and Jaewoong Sim

Proceedings of the 50th ACM/IEEE International Symposium on Computer Architecture (ISCA), 2023

## PATENTS

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**Accelerator and operating method using the same (1020240036408)**

with Jaewoong Sim, Wonbeom Lee

## SKILLS

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- **Languages:** C/C++, CUDA, Python
- **Applications/Frameworks:** PyTorch, TVM, Intel Pin,  $\text{\LaTeX}$