SUHYUN LEE

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EDUCATION

Department of Computer Science and Engineering, Yonsei University Seoul, Korea
MSc/PhD Student in Computer Science   2022 - Present
- Advisor: Prof. Youngsok Kim
- Research area: System Software, Database System, Processing-in-Memory

Department of Computer Science and Engineering, Yonsei University Seoul, Korea
BSc in Computer Science   2017 - 2022

PUBLICATIONS

1. Chaemin Lim, **Suhyun Lee**, Jinwoo Choi, Kwanghyun Park, Jinho Lee, Joonsung Kim, and Youngsok Kim. FaScalSQL: A Fast and Scalable GPU-Accelerated SQL Query Engine for Out-of-Memory Tables. *In Proc. 42nd IEEE International Conference on Data Engineering (ICDE)*, 2026.

2. Chaemin Lim, **Suhyun Lee**, Jinwoo Choi, Joonsung Kim, Jinho Lee, Youngsok Kim. DMO-DB: Mitigating the Data Movement Bottlenecks of GPU-Accelerated Relational OLAP. *In Proc. 34th International Conference on Parallel Architectures and Compilation Techniques (PACT)*, 2025.

3. **Suhyun Lee**, Chaemin Lim, Jinwoo Choi, Heelim Choi, Chan Lee, Yongjun Park, Kwanghyun Park, Hanjun Kim, and Youngsok Kim. SPID-Join: A Skew-resistant Processing-in-DIMM Join Algorithm Exploiting the Bank- and Rank-level Parallelisms of DIMMs. *In Proc. ACM on Management of Data (SIGMOD)*, 2025.

4. Chaemin Lim, **Suhyun Lee**, Jinwoo Choi, Jounghoo Lee, Seongyeon Park, Hanjun Kim, Jinho Lee, and Youngsok Kim. Design and Analysis of a Processing-in-DIMM Join Algorithm: A Case Study with UPMEM DIMMs. *In Proc. ACM on Management of Data (SIGMOD)*, 2023.

5. Jinwoo Choi, Jaeyeon Kim, Chaemin Lim, **Suhyun Lee**, Jinho Lee, Dokyung Song, and Youngsok Kim. GuardiaNN: Fast and Secure On-Device Inference in TrustZone Using Embedded SRAM and Cryptographic Hardware. *In Proc. 23rd ACM/IFIP International Middleware Conference (Middleware)*, 2022.

6. Jounghoo Lee, Yeonan Ha, **Suhyun Lee**, Jinyoung Woo, Jinho Lee, Hanhwi Jang, and Youngsok Kim. GCoM: a detailed GPU core model for accurate analytical modeling of modern GPUs. *In Proc. 49th Annual International Symposium on Computer Architecture (ISCA)*, 2022.

PROJECTS

Optimizing Database Systems Using Processing-in-Memory Hardware
National Research Foundation of Korea (NRF)   2024 - 2026

Exploring Quality-Aware NN Scheduler
LG Electronics   2024 - 2025

AWARDS AND HONORS

- **Scholarship** NRF Fellowship Program for Doctoral Students.   2024.06
- **Best Poster Award** Computer System Society Academic Conference   2023.02

EXPERIENCE

Teaching Assistant: *Computer Architecture (CSI3102),*   2023S
Logic Circuit Design (CSI2111),   2022F
Information Security (CSI4109)   2022S

SKILLS **Languages:** Korean, English.
Programming: C/C++, Python.