[전문연구요원 신규 편입 희망]

Jiun **Jeong**

M.S. Candidate in Computer Science

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I am currently pursuing a Master's degree in Computer Science at Yonsei University. My research focuses on concurrent data structures for persistent memory. Specifically, I am working on the design and testing of the persistent, batch-based, lock-free queue for Intel Optane memory. My research involves developing scalable and efficient non-blocking data structures, ensuring persistence guarantees, devising safe memory reclamation schemes tailored for these data structures, and designing recovery mechanisms to maintain data integrity and consistency in the event of system failures.

Education

Yonsei University — *Republic of Korea*

M.S. in Computer Science — *Mar. 2022 - Feb. 2025*

- Supervisor: Prof. Bernd Burgstaller
- Embedded Systems Languages and Compilers (ELC) Lab
- GPA: 4.27/4.3

Yonsei University — *Republic of Korea*

B.S. in Computer Science — *Mar. 2017 - Feb. 2022*

- Overall GPA: 3.53/4.3, Major GPA: 3.92/4.3

Experience

ELC Lab at Yonsei University — *Republic of Korea*

Undergraduate Research Intern Supervised by Prof. Bernd Burgstaller — *Jan. 2020 - Feb. 2022*

- Profiling techniques for streaming frameworks in the cloud
- Heterogeneous memory architectures
- Testing and debugging support for Ethereum smart contracts at scale

Publications

International Journals

Comprehensive Design Space Exploration for Graph Neural Network Aggregation on GPUs
Hyunwoo Nam, Jay Hwan Lee, Shinhyung Yang, Yeonsoo Kim, Jiun Jeong, Jeonggeun Kim, Bernd Burgstaller
Submitted to IEEE Computer Architecture Letters, October 1, 2024.

Preprints

Cloudprofiler: TSC-Based Inter-Node Profiling and High-Throughput Data Ingestion for Cloud Streaming Workloads
Shinhyung Yang, Jiun Jeong, Bernhard Scholz, Bernd Burgstaller
arXiv preprint, arXiv:2205.09325, 2023
DOI: https://doi.org/10.48550/arXiv.2205.09325

Domestic Conferences

Scalable Off-The-Chain Testing of Ethereum Smart Contracts on a Cluster of Workstations
Jiun Jeong, Yeonsoo Kim, Seongho Jeong, Bernd Burgstaller
Proceedings of the Korea Computer Congress 2024 (KCC 2024), pp. 1624–1626, June 26-28, 2024, ICC Jeju, Jeju Island, Republic of Korea
URL: https://www.dbpia.co.kr/journal/articleDetail?nodeId=NODE11862288

Projects

Smart Near-far Memory Architecture for Data-intensive Workloads — *Republic of Korea*

Samsung DS Division through the Yonsei-Samsung Semiconductor Research Center (YSSRC) — *Sep. 2020 - Present*

Application and Toolchain Support for Processing-in-memory (PIM)
Republic of Korea
Institute of Information & Communications Technology Planning & Evaluation (IITP)
Apr. 2021 - Dec. 2023

An Exa-scale Big Data Analysis Platform for Programmer Productivity and Performance on Clouds of Heterogeneous Multicore
Republic of Korea
National Research Foundation of Korea (NRF)
Jan. 2020 - Oct. 2020

Patents

Apparatus for Optimizing Code for Utilization of Process-In-Memory
Republic of Korea
Bernd Burgstaller, Hyunmo Sung, Seongho Jeong, Jay Hwan Lee, Jiun Jeong, and Shinhyung Yang
Nov. 2023
- Korean Patent Application Number: 10-2023-0169862
- DOI: https://doi.org/10.8080/1020230169862

Awards

Graduate Student Research Assistant Scholarship
Republic of Korea
Department of Computer Science, Yonsei University
Spring 2022 - Fall 2023
- Awarded based on a GPA of 4.13/4.3 in CSI undergraduate courses
- Full scholarship covering four semesters

Excellence Award
Republic of Korea
Software Capstone Design
Spring 2021
- Graduation team project for the Department of Computer Science at Yonsei University
- Title: *Automatic Scoring and Feedback For Precision Education Software*

Excellence Award
Republic of Korea
Software Capstone Design
Fall 2020
- Graduation team project for the Department of Computer Science at Yonsei University
- Title: *Statically Analyzing Access Vectors of Linux Kernel Vulnerabilities on Android Platforms*

Teaching

[CSI4104-01] Compiler Design
Republic of Korea
Teaching Assistant
Fall 2023

[CCO1100-{01, 02, 03}] Computer Programming
Republic of Korea
Teaching Assistant
Spring 2023

[CSI4104-01] Compiler Design
Republic of Korea
Teaching Assistant
Fall 2022

[CAC1100-01] Computer Programming
Republic of Korea
Teaching Assistant
Spring 2022

Language Proficiency

OPIc: Advanced Low (AL)
Republic of Korea
Certificate Expiration Date: 2026/09/04
Sep. 2024
- Highest score for OPIc