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 - Present*

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

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

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
Korea Computer Congress 2024 (KCC 2024), June 26-28, 2024, ICC Jeju, Jeju Island, Republic of Korea
URL: `https://www.dbpia.co.kr/journal/articleDetail?nodeId=NODE11862288`

Awards

2022 - 2023 **Graduate Student Research Assistant Scholarship**, Department of Computer Science, Yonsei University — *Republic of Korea*

2021 **Excellence Award**, Software Capstone Design, Department of Computer Science, Yonsei University — *Republic of Korea*

2020 **Excellence Award**, Software Capstone Design, Department of Computer Science, Yonsei University — *Republic of Korea*

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

New TEPS: 472 / 600 — *Republic of Korea*

Expired: No longer valid — *Sep. 2021*

- Listening Comprehension: 189 / 240
- Vocabulary: 40 / 60
- Grammar: 42 / 60
- Reading Comprehension: 201 / 240

TOEIC: 925 / 990 — *Republic of Korea*

Expired: No longer valid — *May. 2019*

- Listening Comprehension: 495 / 495
- Reading Comprehension: 430 / 495

TOEFL iBT: 104 / 120 — *Republic of Korea*

Expired: No longer valid — *Aug. 2015*

- Reading: 27 / 30
- Listening: 28 / 30
- Speaking: 22 / 30
- Writing: 27 / 30

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`

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*