



# Jiun Jeong

M.S. CANDIDATE IN COMPUTER SCIENCE

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*I received a Master's degree in Computer Science at Yonsei University. My research focused on concurrent data structures for persistent memory. Specifically, I worked on the design and testing of the persistent, batch-based, lock-free queue for Intel Optane memory. My research involved 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

M.S. IN COMPUTER SCIENCE

Republic of Korea

Mar. 2022 - Feb. 2025

- Advisor: Prof. Bernd Burgstaller
- Embedded Systems Languages and Compilers (ELC) Lab
- Thesis: Safe Memory Reclamation and Full-System Crash Recovery for Persistent Lock-Free Batch Queue on Non-Volatile Memory
- Presentation Slides
- GPA: 4.27/4.3

### Yonsei University

B.S. IN COMPUTER SCIENCE

Republic of Korea

Mar. 2017 - Feb. 2022

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

## Experience

### Gaudio Lab, Inc.

AI SDK SOFTWARE ENGINEER (INTERNSHIP)

Republic of Korea

Feb. 2025 - Apr. 2025

- Wrote unit and regression tests to validate SDK APIs
- Built the C-based audio SDK into WebAssembly and integrated it with AudioWorklet for browser-based audio processing

### ELC Lab at Yonsei University

UNDERGRADUATE RESEARCH INTERN SUPERVISED BY PROF. BERND BURGSTALLER

Republic of Korea

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, Shinyung Yang, Yeonsoo Kim, Jiun Jeong, Jeonggeun Kim, Bernd Burgstaller

IEEE Computer Architecture Letters 24.1 (Jan. 2025) pp. 45–48, 2025

DOI: [10.1109/LCA.2025.3539371](https://doi.org/10.1109/LCA.2025.3539371)

### PREPRINTS

Cloudprofiler: TSC-Based Inter-Node Profiling and High-Throughput Data Ingestion for Cloud Streaming Workloads

Shinyung 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>

## Patents

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### Apparatus for Optimizing Code for Utilization of Process-In-Memory

BERND BURGSTALLER, HYUNMO SUNG, SEONGHO JEONG, JAY HWAN LEE, JIUN JEONG, AND SHINHYUNG YANG

- Korean Patent Application Number: 10-2023-0169862
- DOI: <https://doi.org/10.8080/1020230169862>

Republic of Korea

Nov. 2023

## Awards

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### Graduate Student Research Assistant Scholarship

DEPARTMENT OF COMPUTER SCIENCE, YONSEI UNIVERSITY

- Awarded based on a GPA of 4.13/4.3 in CSI undergraduate courses
- Full scholarship covering four semesters

Republic of Korea

Spring 2022 - Fall 2023

### Excellence Award

SOFTWARE CAPSTONE DESIGN

- Graduation team project for the Department of Computer Science at Yonsei University
- Title: *Statically Analyzing Access Vectors of Linux Kernel Vulnerabilities on Android Platforms*

Republic of Korea

Spring 2021

### Excellence Award

SOFTWARE CAPSTONE DESIGN

- Graduation team project for the Department of Computer Science at Yonsei University
- Title: *Automatic Scoring and Feedback For Precision Education Software*

Republic of Korea

Fall 2020

## Teaching

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### [CSI4104-01] Compiler Design

TEACHING ASSISTANT

Republic of Korea

Fall 2023

### [CCO1100-{01, 02, 03}] Computer Programming

TEACHING ASSISTANT

Republic of Korea

Spring 2023

### [CSI4104-01] Compiler Design

TEACHING ASSISTANT

Republic of Korea

Fall 2022

### [CAC1100-01] Computer Programming

TEACHING ASSISTANT

Republic of Korea

Spring 2022

## Language Proficiency

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### TOEIC Speaking: 160 / 200

CERTIFICATE EXPIRATION DATE: 2027/02/16

- Advanced Low (AL) on ACTFL Proficiency LEVEL

Republic of Korea

Feb. 2025

### TOEIC: 955 / 990

CERTIFICATE EXPIRATION DATE: 2027/02/15

- Listening Comprehension: 480 / 495
- Reading Comprehension: 475 / 495

Republic of Korea

Feb. 2025

### OPIc: Advanced Low (AL)

CERTIFICATE EXPIRATION DATE: 2026/09/04

- Highest score for OPIc

Republic of Korea

Sep. 2024