

Hojoon Kim

Last Update: Sep 2024

📞 (+82) 10-7475-0565 ✉️ hojoonkim.02@gmail.com [🌐 linkedin.com/in/kim-hojoon](https://www.linkedin.com/in/kim-hojoon) [🐙 github.com/kim-hojoon](https://github.com/kim-hojoon)

Education

KAIST

B.S. in Computer Science and Electrical Engineering

- GPA: 4.14/4.30

Daejeon, Republic of Korea

Mar. 2021 - Current

EPFL

Exchange Student in Computer Science

- **Coursework:** Advanced Compiler Construction, Intro to Machine Learning, Computer Vision, Undergrad Research

Lausanne, Switzerland

Feb. 2024 - Jul. 2024

Research Interest

My research interests lie at the intersection of system architecture and complex challenges. I am passionate about applying core principles of computer systems to optimize high-level problems in areas like computer vision.

Research Experience

Parallel Systems Architecture Lab (PARSA)

Visiting Researcher; Advisor: Babak Falsafi

- Contributed to the Midgard project, a novel virtual memory design that divides address translation into two parts.
- Proposed a lazy invalidation technique for translations in the Midgard virtual memory system, reducing unnecessary cache flushes and enhancing memory management efficiency.
- Designed experiments using the Linux kernel to evaluate the effectiveness of the proposed method.

Lausanne, Switzerland

Mar. 2024 - Jun. 2024

Computer Architecture and Systems Lab (CASYS)

Undergraduate Researcher; Advisor: Jongse Park

- Contributed to a Video Understanding project.
- Analyzed the performance of the method based on the computational ratios.
- Conducted comprehensive literature reviews, summarizing relevant research papers for the project.

Daejeon, Republic of Korea

Jun. 2023 - Jan. 2024

Projects

L3 Project (CS-420 Advanced Compiler Construction) at EPFL | *Scala, C, Compiler & Virtual Machine Concepts*

- L3 (Lisp-like Language) is a special functional language designed for CS-420 course.
- Developed the backend interpreters for the L3 Compiler using Scala.
- Implemented components of the L3 Virtual Machine using C.
- Focused on CPS conversion, value representation, closure conversion, and garbage collection.

CS320 Project (CS320 Programming Language) at KAIST | *Scala, Programming Language Concepts*

- Built interpreters for various toy languages using Scala.
- Gradually added complex features like continuations, closures, scoping, and type systems.

Technical Skills

Technologies / Environments: PyTorch, Git, Docker

Concepts: Microarchitecture, Operating System, Virtual Memory, Cache Memory, Compiler, Artificial Intelligence, Machine Learning, Computer Vision

Teaching/Mentoring

Teaching Assistant: KAIST CS101 Introduction to Programming

Sep. 2023 - Dec. 2023

Mentor: KAIST CS101 Introduction to Programming

Sep. 2023 - Dec. 2023

Services

Team Leader: of Director at KAIST Broadcasting System

Association Member: at KAIST Freshman Student Council & KAIST School of Computing Student Council