Minseo Kim (김민서)

kimminss0@outlook.kr github.com/kimminss0 blog.mskim.org

Education

POSTECH (Pohang University of Science and Technology) *Feb 2022 – Present*

B.S. in Computer Science and Engineering

Work Experience

ENERZAi Inc. *Jul 2026 – Present*

AI Compiler Engineer

Developing a compiler for an in-house programming language targeting high-performance AI workloads on edge devices.

- Industrial Technical Personnel (산업기능요원), South Korea's alternative military service program.
- Skills: MLIR, C++

Wordbricks LLC *Jun 2025 – Aug 2025*

Full-stack Web Developer Intern

Led and developed an LLM-based web crawling API and dashboard as a Product Owner.

- Skills: Next.js, Hono, Cloudflare Workers, Vercel AI SDK, Prisma, Supabase

POSTECH Data Systems Lab *Jan 2023 – Jan 2024*

Undergraduate Researcher

Led the end-to-end development of an integrated database website for an academic conference, covering full-stack web development, automated data pipelines, query optimization, and data visualization.

- Skills: React.js, Express.js, PostgreSQL, Airflow

Personal Projects

Tiny ML Compiler *May 2025*

Compiler for Tiny ML, a functional programming language based on Standard ML.

- Key Implementations:
  - Hindley-Milner type system based on Algorithm W, featuring let-polymorphism.
  - Code generation to the assembly language of a virtual machine.
  - Support for algebraic data types (ADTs), including recursive types and pattern matching.
  - Support for closures, higher-order functions, and recursive functions.
- Skills: OCaml

Pintos *Sep 2025 – Dec 2025*

Educational operating system for 80x86 architecture (based on Stanford CS140)

- Key Implementations:
  - Kernel-level threading with priority scheduling and synchronization primitives (locks, semaphores).
  - System call implementation for user program execution, process management, and file operations.
  - Virtual memory system featuring demand paging, stack growth, and memory-mapped files.
- Skills: C, x86 Assembly, GDB

RISC-V CPU *Mar 2025 – May 2025*

5-stage pipelined RISC-V CPU (2-person project)

- Implemented a subset of the RV32I ISA.
- Key Implementations:
  - Hazard detection unit with data forwarding.
  - Gshare branch predictor with a 2-bit saturating counter and pattern history table (PHT).
  - Direct-mapped cache.

- Skills: Verilog HDL

Sponge *Mar 2025 – May 2025*

Educational network stack development project (based on Stanford CS144)

- Key Implementations:
  - TCP flow control.
  - Routing table lookup and packet forwarding.
  - ARP and IP packet processing.
- Skills: C++

BaroKey *Nov 2023*

Submitted to the 3rd UniDThon Hackathon (team project).

- Developed a web service that provides users with real-time emergency keywords, such as safety threats or natural disasters, based on their location.
- Role: Team Leader, Full-stack Developer (Led Backend & Infrastructure)

Skills

Programming Languages	C, C++, Python, TypeScript, Java, Go, OCaml
System	Linux, FreeBSD, GDB
Web Development	React.js, Next.js, Express.js, FastAPI
Tools / Miscellaneous	Docker, Nginx, SQL