# Jinho Choi

System Engineer

## Contact

**Phone**

010-4628-4501

**E-mail**

choijinho817@kaist.ac.kr

choijinho817@gmail.com

**LinkedIn**

www.linkedin.com/in/jinho-choi-921432215

**Blog**

ball-blog.vercel.app

**Github**

https://github.com/jinho-choi123

## Skills

Rust, Python, Pytorch, Web Development, Concurrent Programming

## Languages

Korean (Native language)

English (Proficient)

## Education

| | |
|---|---|
| 2019.03 – 2026.08(Expected) | **School of Computing @KAIST** |
| | Korea Advanced Institute of Science & Technology (KAIST) |
| | Total GPA: 3.85/4.3, Credits Taken: 113/138 |

## Research Interests

AI Accelerating Computer System
- Build efficient AI inference/training system
- Enjoy thinking a system design that can overcome the current limitation

## Work/Internship Experience

(Jun 2025 – Present) **HyperAccel – AI Accelerator Startup**
- Develop vLLM device plugin for LPU
- Develop LPU Host Runtime

(Mar 2025 – Jun 2025) **KAIST Casys Lab (Prof. Jaehyuk Huh) – Lab Intern for AI Accelerator**
- Research AI Accelerating System with efficient KV cache management

(Mar 2024 – Jul 2024) **KAIST Casys Lab (Prof. Youngjin Kwon) – Lab Intern for Secure Memory System**
- https://github.com/casys-kaist/BUDAlloc
- Research Use-After-Free memory bug detection/prevention system

(Mar 2024 – Jul 2024) **KAIST Casys Lab (Prof. Jaehyuk Huh) – Lab Intern for CXL System**
- Study efficient memory management for Tiered-Memory system

(Feb 2022 – May 2024) **SPARCS, KAIST – Full Stack Developer**
- https://zabo.sparcs.org/
- Contribute to KAIST Online-Board Service ZABO

## Project Experience

(Mar 2025 – Present) **Compiler Design**
- Assignment project for KAIST CS.40200(Compiler Design)
- Design a C Compiler using Rust
- Implement IR generation feature, and apply several optimizations to the IR
- Apply Optimizations such as CFG simplification, register promotion, and global value numberings

(Mar 2024 – Jul 2024) **Safe API for Concurrent programming**
- Assignment project for KAIST CS.40301(Concurrent Programming)
- Design a Safe API for concurrent programming in Rust
- Implement lock coupled linked-list and lock-free hashtable
- Implement concurrent programming data-structure wrapper Arc(Atomic Reference Count)

(Mar 2024 – Jul 2024) **BUDAlloc, Use-After-Free detection/prevention system**
- Secure Memory System Project at KAIST Casys Lab(prof. Youngjin Kwon)
- Design a Use-After-Free memory bug prevention/detection system using One-Time-Allocator Concept
- Run SPEC CPU 2006, PARSEC 3.0 Benchmark and examine performance and memory footprint
- Suggest an optimization to minimize trie-search overhead, and implement it

(Mar 2024 – Jul 2024) **Application of NeuralODE to MNIST & CIFAR10 classification task**
- Assignment project for KAIST CS.30706(Machine Learning)

- Understand NeuralODE pytorch library(https://github.com/rtqichen/torchdiffeq)
- Train NeuralODE Solver for MNIST and CIFAR10 classification task

(Feb 2022 – May 2024) **ZABO, KAIST Online Board Service**
- Online board web service lauched at SPARCS, KAIST
- Implement Admin Panel and Advertisement Page
- Dockerize the environment and build CD pipeline
- Backend: https://github.com/sparcs-kaist/zabo-server-nodejs
- Frontend: https://github.com/sparcs-kaist/zabo-front-reactjs
- Advertisement Page: https://github.com/sparcs-kaist/zabo-boards

## Computer System Study

**KAIST CS.40200 – Compiler Design**
- Building a C-Compiler with various optimizations

**KAIST CS.40301 – Concurrent Programming**
- Design a safe API, all kinds of locks and lock-free data structures, for concurrent programming

**KAIST CS.30300 – Operating Systems and Lab**
- Organize various design choice taken by Operating System.

**KAIST CS.30101 – Computer Organization**
- Deeply study about CPU architecture such as Caching, Pipelining, Logic Unit.

**KAIST EE.30003 – Digital System**
- Deep understanding of building Logic Unit

**KAIST CS.20300 – System Programming**
- Understand overall structure of Computer System

## Awards

(Nov 2023) **Uni-DTHON 2nd Place Awards**
- Build Privacy-protection online business-card service
- Business card that selectively show personal information