

EDUCATION

Carnegie Mellon University

B.S. in Electrical and Computer Engineering

minor in Machine Learning

📍 Pittsburgh, PA | 📅 Expected May 2025

Major GPA: 3.85 / 4.0

M.S. in Electrical and Computer

Engineering: AI/ML Concentration

📍 Pittsburgh, PA | 📅 Expected May 2026

SELECTED COURSEWORK

- Pattern Recognition for Computer Vision
- Machine Learning
- Machine Learning with Large Datasets
- Distributed Systems
- Computer Systems
- Principles of Imperative Computation

SKILLS

Languages

Python • Go • C • Rust • SystemVerilog

Tools

Shell scripting • YAML • Helm • Linux/Unix CLI • Git • AWS (EC2, EMR, S3) • PySpark • Pandas • NumPy • Vim

Frameworks

PyTorch • TensorFlow • Kubernetes • Docker • KinD • DataBricks

LINKS



WORK EXPERIENCE

FuriosaAI | Software Engineer Intern

📍 Seoul, South Korea | 📅 June 2024 – Aug 2024

- Thrived in a **fast-paced startup environment**, adapting to rapid changes and contributing to the company's evolving technology stack
- Architected a **Kubernetes-in-Kubernetes** test environment using **KinD**, eliminating the need for a new **bare metal server**, **saving \$10k+**
- Implemented a **Rust-based** setup-teardown framework for System Management Interface (SMI) tests, **boosting test writing efficiency by 21%**
- Developed critical **SDK APIs**, enhancing system functionality and integration capabilities
- Created a tool to optimize **Go bindings**, achieving **87.5% efficiency improvement** in struct field management

Republic of Korea Army | Squad Leader / Peer Counselor / Sergeant

📍 Gyeongsangnam-do, Korea | 📅 Aug 2020 – Feb 2022

- **Led and managed** the development, health, morale, and welfare of **33 soldiers**
- Initiated and facilitated **peer-counseling sessions**, enhancing team communication and cohesion
- Recognized as a **"special warrior"** for exceptional performance and leadership skills

PROJECT EXPERIENCE

Distributed Bitcoin Miner / LSP protocol

📍 Pittsburgh, PA | 📅 Sep 2023 - October 2023

- Engineered a reliable **transport layer protocol (LSP)** on UDP using **Go**, ensuring in-order packet delivery
- Constructed a **distributed Bitcoin mining system**, demonstrating **30% performance improvement** over single-miner setups
- Designed **fault-tolerant architecture** to handle network uncertainties and machine failures

Dynamic Memory Allocator

📅 March 2023

- Crafted a **high-performance dynamic memory allocator** for C programs
- Incorporated advanced optimization techniques including **segregated free lists** and **immediate coalescing**
- Achieved **74.0% memory utilization** and **10,400 Kops allocation throughput**

Patent: Self-buoyant stretcher

📅 April 2018 (Korea Patent Application Number:10-2018-0088971)

- **Led development** of an underwater self-buoyant stretcher for diver support in carcass preservation
- **Collaborated** with Korea Coast Guard to design, develop, and test the product
- Secured **patent** and **official approval** for use by Korea Coast Guard

RESEARCH

Yuejie Chi lab @ CMU | Research Assistant

📍 Hybrid | 📅 May 2023 – April 2024

- Developed a scalable **RL scheduler** for **cloud resource optimization**, incorporating advanced concepts like **Domain Randomization** and **curiosity-driven exploration**
- Achieved **13% energy savings** through improved decision-making in cloud resource allocation
- Conceptualized a novel **pretraining strategy** for DQN using **Automatic Domain Randomizations**
- **Co-authored** a paper on the developed techniques, submitted to **GLOBECOM 2024**